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Fig. 1.
Mole on Post-Auricular Region.



Fig. 2.
Pigmented Hairy Mole.



Fig. 3.
Hairy Mole which began as a Vascular Nævus.



Fig. 4.
Pigmented Mole.

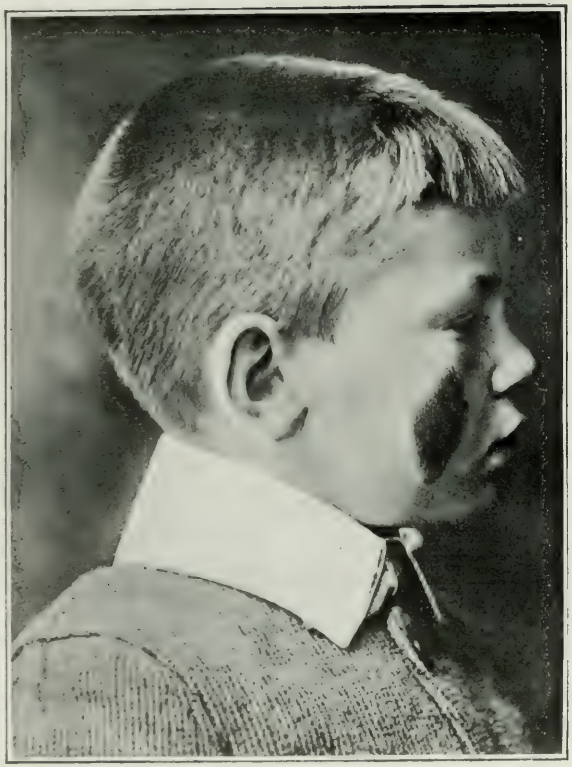


Fig. 5.
Hairy Mole.



Fig. 6.
Verrucose Nævus of Neck.



Fig. 7.
Verrucose Nævus of Neck.

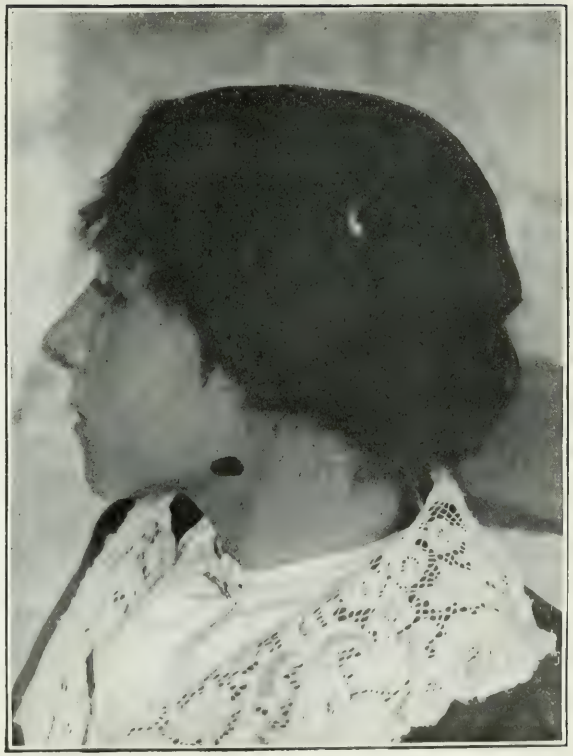


Fig. 8.
Pigmented Mole of Neck.



Fig 9.

Series of Moles along the position of the oblique facial cleft.

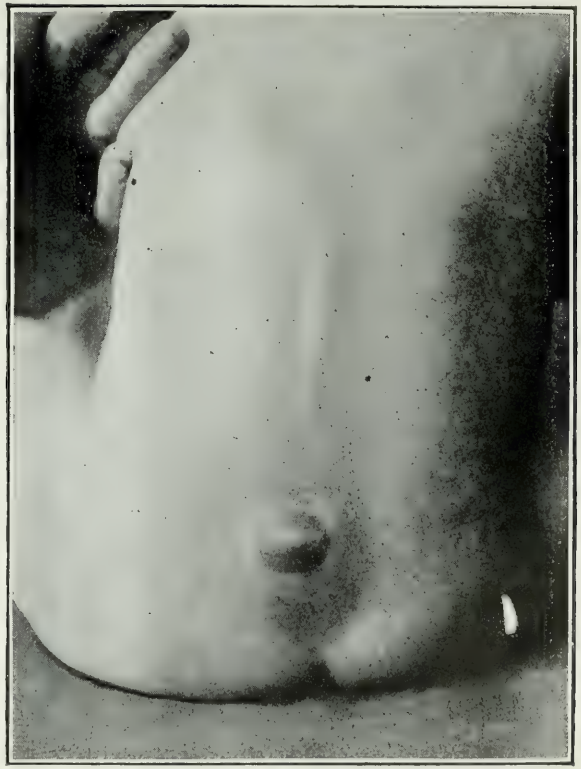


Fig. 10.

Pigmented soft mole over spina bifida.



Fig. 11.

Verrucose Nævus over spina bifida.



Fig. 12.

Dimple on right cheek in the situation of the mandibular tubercle.

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RESEARCHES INTO THE ORIGIN AND STRUCTURE OF MOLES, AND THEIR RELATION TO MALIGNANCY.*

By WILFRID S. FOX, M.A., M.D., M.R.C.P.,
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In view of the fact that the recent tendency of research into the origin of cancer and malignancy in general has been to give up the infective hypothesis and revert to the older suggestion of developmental sequestration of fœtal relics, it is interesting at the present moment to investigate the forerunners of malignancy, and in particular that one which appears most likely to be of congenital and developmental origin, in the hope that through it we may be able to throw some light upon the more important question of malignancy itself.

I propose, in the first place, to define exactly what I understand by the term "mole." Clinically, they are seen as circumscribed patches on the skin, which differ greatly in size, appear, as a rule, soon after birth, rarely at birth, grow larger during childhood, and generally remain stationary for the remainder of life. They may, or may not, be covered with hair, and are nearly always more or less deeply pigmented. Occasionally conditions of excessive cornification may occur in the epidermis over them, leading to a more warty

* Thesis written for M.D. degree Cambridge.

The accompanying photographs are from patients of Mr. J. Howell Evans, to whom I am greatly indebted for permission to publish them.

appearance. In short, they may be called "pigmented nævi," using the term "nævi" in the Continental sense. In this country, when speaking of nævi, we generally refer to tumours of vascular structure, either "hæmangioma" or "lymphangioma"; on the Continent the term has been used with a much wider significance, and covers many congenital affections of the skin. The term "nævus," which is short for "nævus maternus," or "mother's mark," has nothing to do with "nativus," as some authors erroneously affirm. Gaucher (1) refers to the popular name of "envies" given to them on account of the belief that their production was due to the longings of pregnancy, and he defines nævi as congenital cutaneous deformities.

In 1885 Lesser (2) defined nævi as "those congenital alterations of the skin in which is present in the first place a circumscribed augmentation of pigment, but in which other parts of the skin, the corium, the papillary body, the corneous layer may also be hypertrophied. Hence nævi may be divided into two classes: (*a*) smooth nævi, in which we deal essentially only with an abnormal pigmentation; and (*b*) verrucose or hard nævi, in which other parts of the skin are at the same time more or less hypertrophied. Verrucose nævi may be subdivided still further into classes according to the layer which is hypertrophied."

Unna (3) defines nævi as "circumscribed small malformations of the skin, which have an hereditary basis, or have their foundation laid in embryonic life, become evident at different periods of life, develop very slowly, and are distinguished by their colour or the form of their surface." Rist (4) agrees with Brocq, and defines nævi, shortly, as "all circumscribed cutaneous deformities." Or, in other words, a nævus is any circumscribed anomaly of the skin or mucous membrane which is of congenital origin. This definition, then, includes the following groups:

(1) Vascular nævi, or the common nævi in the English sense of the word.

(2) Dermoid cysts.

(3) Hard nævi.

(4) Soft nævi, or moles as they are usually understood.

(5) Giant nævi.

(6) Linear nævi, including "nævus unius lateris."

(7) Mollusciform nævi.

For the purposes of this paper I will include under the term "mole" all varieties of nævi except Groups 1 and 2, vascular nævi and dermoid cysts; although, as will be seen further on, there seems to be an intimate connection between these latter and the former; the five last groups are probably of similar origin, and differ only in structure and appearance.

Having defined the terms "nævus" and "mole" respectively, I now propose to discuss the various kinds of moles.

Of the five remaining varieties of nævi, the hard and soft nævi (3 and 4) are by far the commonest, and it is with the histology and development of them that I propose chiefly to deal. Concerning the rarer varieties a few words may, however, be said.

Giant nævi are as a rule simply very large soft nævi; they are usually covered with hair and are sometimes symmetrical, in which case they seem to have a predilection for the lower parts of the abdomen, buttocks, and upper part of the thighs, forming the so-called bathing-drawers pattern, and sometimes unilateral, corresponding more or less accurately with the distribution of a cutaneous nerve or group of nerves.

Linear nævi are extremely interesting deformities, if only on account of the number of hypotheses which have been put forward to explain their distribution. They are seen as long streaks of raised epidermal material sometimes running the whole length of a limb. Merklen and Besnier (5) reported a case of which there is a moulage in the St. Louis Museum at Paris; in it the nævus starts at the upper part of the thigh, and is continued down to below the knee, corresponding exactly with the internal saphenous vein. Others, again, correspond with the anatomical distribution of a nerve, which suggested to von Bärensprung (6) that they were analogous to Herpes zoster and caused by an intra-uterine affection of the spinal ganglia. He also points out that, as in herpes, we do not see the eruption covering the whole distribution of the nerve.

Philippson, again, suggests that they correspond with Voigt's lines, which are imaginary lines mapping out the points of junction of the various areas of the cutaneous nerve-supply. Heller (7) thought that they had some connection with the superficial lymph-vessels. Other explanations are, that they correspond with the metameric segments, or with lines of cleavage of the skin; in connection with the latter

hypothesis MacLeod (8) has pointed out that the lines of cleavage are mostly curved, whereas the nævi are usually straight. As may be well imagined from the above, no one of the various hypotheses covers all the cases, and there are some cases which do not appear to come under any of the above explanations. Occasionally this type of nævus case is seen in wider patches, and has the appearance of a circumscribed ichthyosis. The variety described as "nævus unius lateris" by von Bärensprung (9) and Unna (10) is simply the zosteriform type mentioned above. I have not been able to obtain any tissue of this kind of nævus, and can, therefore, give no views on its histology, which, to judge from the various authorities, appears to be rather mixed.

Mollusciform nævi are simply soft nævi which, owing to constriction at the base, have become œdematous; this has been pointed out by Unna (11), who found the definite columns of so-called nævus-cells in three specimens out of thirteen and the degenerated remains in others.

Before discussing the histological structure of moles, which is the chief object of this paper, one might consider with advantage their clinical aspects, and in particular the anatomical positions in which they are commonly found, with a view to seeing if we can deduce anything from this which might give some indication of their development and probable origin.

Moles are present most frequently on the face, where they correspond for the most part with the position of some embryonic cleft, or with the position in which some well-recognised developmental error is commonly seen, such as an accessory auricle, mandibular tubercle, or an accessory tragus. Whitfield (12) relates a case of a mole situated at the junction of the left ala nasi with the upper lip, which, as he points out, corresponds exactly with the position of Bland-Sutton's sequestration dermoid of the naso-facial sulcus; since reading this I have myself noticed two other moles in exactly the same position. The outer margin of the orbit is also a fairly common situation for moles; examples of this are shown in the accompanying photographs (Figs. 2 and 3); it will be noted that the mother in Fig. 2 also has a small mole in the mid-line of the neck.

The mid-line of the face and body is another common situation in which they are found, and no less than five of my series came from

this position, one from the mid-line of the nose, one from the neck, and three from the abdomen. A true mole is frequently seen in place of a mere tuft of hair over a spina bifida occulta. The situation in which helical fistulæ are seen is, as has been shown by Howell Evans, a position in which one sometimes sees a mole. Another situation in which moles are often seen is the neck, corresponding with one or the other of the branchial clefts, and in particular with the posterior margin of the clefts, over the sterno-mastoid muscle. From this it may fairly be said that moles occur in places where in the course of development it seems probable that epidermal cells *might* be cut off. The relation between moles on the one hand, and dermoids and helical fistulæ where there is definite indentation of the epidermis on the other, is distinctly suggestive. Besides the above, moles also occur in the mammary line and at points where cutaneous nerves come to the surface. This connection between moles and the cutaneous nerve-supply is not surprising when one considers the intimate developmental relation between the skin and the nervous system. The connection between moles and spina bifida occulta, referred to above, also points in the same direction. Many authors have noted the marked liability to moles among persons who have some gross deformity, such as hair-lip or cleft palate, and in one of my own cases the patient had webbed toes on each foot. Epileptics, idiots, and hydrocephalics have also been reported by some authors (13) to be particularly prone to moles. Heredity seems to play some part, and one occasionally sees a mole in a child, while the mother has some other deformity in the same situation.

The accompanying photographs illustrate the points mentioned as regards the connection between moles and errors of development.

Description of Figs. 1–12.

(1) This is a photograph of a mole situated in the post-auricular region and coincides with the place in which dermoids occur, which are due, according to Mr. Howell Evans, to mal-development of the otic vesicle. The histology of this specimen is given later on, and forms No. I of my series.

(2) This specimen has already been mentioned above, but it is interesting to point out that when Mr. Howell Evans first saw the lesion it was of a typical vascular variety and bright red in colour, whereas now it is a pigmented hairy mole. Dr. J. M. H. MacLeod also reports a similar case.

(3) This specimen somewhat resembles the above in that, when first seen, it

was an ordinary vascular nævus; now, at the age of twelve weeks, it is less bright, and shows fine, delicate hairs. The case has an additional interest as it is the child of the woman seen in Fig. 4.

(4) This is the photograph of a woman who has a deformity of the ear on the same side as her infant, whom we have seen above.

(5) This specimen shows a case of an ordinary hairy mole in the position of the mandibular tubercle, which, as Mr. Bland-Sutton (14) points out, is structurally a small dermoid, and is seen well marked in dogs, in whom it is covered with bristles. A milder form of deformity commonly seen in this position is the ordinary dimple which is sometimes present on the inner surface of the cheek, especially when the mandibular tubercle is seen on the outer surface. These, (6) and (7), are examples of verrucose nævi in the neck occupying the position in which malformations of the branchial clefts are seen.

(8) This shows a pigmentary mole in the same situation as Figs. 6 and 7.

(9) The photograph shows a series of moles situated along the position of the oblique facial cleft.

(10) The photograph is an example of a pigmented soft mole over a spina bifida.

(11) This shows a verrucose nævus in the same situation as in the preceding one.

(12) This shows a unilateral dimple on the right cheek in the situation of the mandibular tubercle.

Conjunctival moles are peculiar and interesting deformities, and Mr. Bland-Sutton (15), who points out that they are not commonly seen in the line of the palpebral fissure at the margin of the cornea, figures a case of Cowell's (16), in which a boy, who has a conjunctival mole, also shows a mandibular tubercle and an accessory tragus. He is (17) of the opinion that the deformity is due to imperfect union in embryonic life.

Vascular and pigmentary nævi are frequently seen to be present together in the same person; for example, No. II of my series showed a hairy mole, a vascular nævus, and a meningocele. Gaucher (18) mentions seeing hard nævi mixed with vascular and soft ones, and argues the developmental origin of them all. He (19) also lays stress on the fact that while vascular nævi tend to regress after birth, pigmentary nævi, on the other hand, generally appear to increase during childhood and show no signs of regression, which gives the probable explanation of the cases mentioned above, in which vascular nævi become pigmentary. Since both are developmental errors, they are likely to occur over spots, such as clefts, where deformities are common, and should they coincide the vascular nævus, which is visible at birth, will tend to fade, whereas the pigmentary mole will develop, as we shall see further on, and blot out the vascular remains.

It may be suggested that this process of development of a mole out of a vascular nævus is an argument in favour of the endothelial origin of the so-called nævus cells, but in view of the histology, which we shall study presently, I think the former explanation the more probable.

One must, of course, admit that there are numerous moles which do not fit in with any of the above anatomical positions, and yet I think that the clinical evidence, as far as it goes, points in favour of the epidermal origin of the so-called nævus cells. From this point of view the mole would consist of cells derived from the epidermis simply by faulty joining up in the embryo, the cells being perfectly passive in the matter. Now, the histological evidence, such as it is, does not point to this passive inclusion of epidermal cells in the corium, but shows rather an active process among certain cells of the prickle-cell layer which separate themselves off from their fellows, grow downwards, and rupture through the basal layer of the epidermis, forming a mass in the upper part of the corium. This may be explained, perhaps, by the supposition that at these anatomical points of juncture the connection between the epidermal cells is not so good as elsewhere, possibly through some deficiency in the epithelial fibrils or prickles, and when malignancy occurs the cells which tend to grow downwards and form the tumour are those cells which, from some cause or another, have lost their prickles.

Histology.

The histology of the hard and soft nævi differs so much that it will be more simple to discuss them separately. Hard nævi have been defined by Unna (20) as "tumours of 'epithelia' which are not deposited in the cutis and have retained their hard structures," as opposed to soft nævi, which are "the embryonic deposition of 'epithelia' in the upper part of the cutis, which, by the loss of their epithelial fibrilation, have lost their stiffness." To put it more plainly, a hard nævus is a congenital localised upward growth of a portion or the whole of the epidermis. They may be subdivided, as we have already seen, into groups according to the layer of the epidermis which is increased; for all practical purposes, however, there are three varieties: (*a*) those in which the stratum corneum alone is thickened; (*b*) those which consist chiefly of the prickle-cell layer,

and (*c*) the combination of the two. The name "keratoid nævus" has been given to Class (*a*) and acanthoid to Class (*b*)—Unna (21). The former is not simply a later development of the latter, because the combination of the two in one growth is often seen, and both varieties may occur on different parts of the same person, and anomalies of cornification, namely horny pearls, may be seen in the acanthoid variety. In my series of specimens described later, Numbers IX and XII show both layers implicated; X *b* is of the keratoid type, and X *a*, XI, and XIII are of the acanthoid variety. Number XI is, so far as I have seen, an unique specimen, in that it is hairy in spite of the fact that Unna (22) maintains that hard nævi are never hairy. It is extremely difficult to explain how hard nævi come to arise. The proof that they must be something more than an abnormal coherence of epidermal cells is that some consist of cells derived from one layer only, and since the epidermis is throughout life being continually shed, there must be, as Unna (23) suggests, some innate property of developing a tumour, which the cells hand on to their descendants. There is a difference between a hard nævus and a cutaneous horn, because in the former we see none of the so-called medullary substance found in the latter—Unna (24). The epidermal appendages, such as the sebaceous glands, have been reported by some authors (25) to be hypertrophied in the acanthoid type, and this being so, it is difficult to see why the increase of hair-follicles, which are also developed by down-growths of the epidermis, should be so rare. The detailed microscopical description of this variety of nævus will be found under the specimens mentioned, and the relation which it has with malignancy will be discussed below under that heading.

Soft nævi consist of an infiltration of cells in the upper part of the corium, immediately below the epidermis. These cells are arranged in more or less parallel columns, and in the majority of cases the columns run perpendicularly to the surface. They were first noticed by Demiéville (26) in 1880, who held that they arose from the blood-vessels, in which he said the endothelium was seen to be thickened and the outer coat infiltrated with round and oval nuclei. These cells in the corium are the so-called "nævus-cells," and will be referred to below by that name.

In 1882 von Recklinghausen (27) originated the idea that the

nævus-cells were derived from the endothelium of the lymphatics, and he therefore gave the name "lymphangio-fibroma" to soft moles.

In 1893 Unna (28) opposed this suggestion, and put forward the hypothesis that the nævus-cells were epidermal in origin, and were cut off in the corium in infancy, or embryonic life—in fact, were "cell-rests" in the true Cohnheim sense. Since that date the battle between the upholders of this on the one side and von Recklinghausen's hypothesis on the other has been raging more or less continually, and is still undecided.

These columns of cells are supported on each side by the fibrous tissue of the corium, to which of late the name of "collagen" has been given, and I shall make use of this more convenient term in this paper. There is, in the great majority of cases, no collagen between the individual cells of the columns. Clinically some surgeons (29) speak of moles as being very vascular, on account of the very slight injury that is required to make them bleed. Under the microscope, however, they are seen to be remarkably deficient in blood-vessels, and Ribbert (30) has demonstrated this more clearly by the process of injection. It is, therefore, evident that it is not the increase of blood-supply which makes so many moles hairy. And in connection with this matter Unna (31) points out that the columns of nævus-cells are often seen in connection with the hair-follicles, and specimen Number II of my series shows this very clearly. He (32) also points out that there is a general atrophy of the hairs because of the pressure exerted by the down-growth of the columns, and this is especially the case if the development of the nævus takes place at the time of the change of hair in infants. If the hairs live past this critical period, there is no cause for falling out; they may even be thickened.

The epidermis over this infiltration of cells is frequently unchanged in structure; but sometimes a condition of increased cornification or hyperkeratosis is seen, which gives the appearance of a mixture between a hard nævus in the epidermis and a soft one in the corium. This is seen more particularly in the older moles, and is due to the fact that at that time they project more, and are therefore more liable to suffer from friction.

Pigmentation varies greatly in amount, and is seen in the epidermis and in the nævus-cells in the corium; its significance and origin will be discussed later.

Moles, although congenital in origin, are by no means necessarily present at birth; in fact, they are rather rare at that time, as has been shown by Hallopeau (33), who compared the number of moles found on adults with the number seen on new-born infants in a maternity hospital. In Number I of my series the mole was not present at birth, but was noticed at the age of one week. They most commonly make their appearance during the first year of life, but occasionally their development is delayed till puberty, or even later. For the first few years of their existence they usually increase slowly in size, and do not show any elevation from the surface of the skin. After puberty they may either remain as flat moles till the end of life or, as is more usual, begin to project slightly, carrying the hair-follicles with them, and this process of gradual elevation continues, till at last in old age they become mushroom-shaped. Unna (34) has called this process the "birth" of the mole, and he thinks it is due to two causes—(1) the increase of the epithelium, and (2) the diminution of the elastin in the cutis. He maintains that the down-growth of epidermal cells destroys by pressure the intervening elastin, so that the infiltrated area of corium which forms the mole becomes quite inelastic, and is therefore pushed out at every active or passive movement of the body by the elastic corium below and at the sides.

We have so far discussed that part of the structure of soft moles upon which nearly all histologists are agreed, and we will now review the evidence which has been brought by the two sides as to the origin of these extremely interesting nævus-cells, and then see to what extent the material which we have supports either view. In favour of von Recklinghausen's idea we have, amongst others, Leedham Green, Bauer, and Johnston. On Unna's side are Whitfield, Hodara, Gilchrist, Kromayer, Audry, Darier, and Delbanco. Kromayer's (35) opinion is of some importance, since he originally held the contrary view, and supported von Recklinghausen. On the other side, also, we have a convert in Johnston, who, as he himself acknowledges, when he started his paper, believed in the epidermal origin of nævus cells; and indeed, in a note on a case of Foster's (36) in 1899, he says definitely that he agrees with Unna, whereas now (37) he ardently supports the endothelial view. So that it will be seen that any evidence which is to carry conviction must be of the most convincing kind.

Von Recklinghausen (38) gave as his real reasons for propounding the endothelial hypothesis that (1) the shape of the nævus cells resembled that of the cells forming the endothelium of the lymphatics, and (2) the arrangement in columns coincided with that of the normal lymph-vessels in the skin. He acknowledges that he saw no endothelial lining to the spaces in which the cells lay, no lumen between the rows of cells, and no arrangement in layers, as one would expect if the columns were simply hypertrophied endothelial linings. Nevertheless this view was accepted everywhere, until Unna (39) replied, giving the following reasons for disbelieving von Recklinghausen's hypothesis :

(1) There is never any regular concentric arrangement, which ought to be evident in transverse sections of the cords.

(2) The cords never show any well-margined lumen.

(3) The cords are vertical, while the lymph-vessels run horizontally.

(4) Cords are seen both running parallel and crossing each other at every angle, instead of forming a plexus.

(5) At the base columns often disappear, whereas they ought to be the more evident.

(6) At the periphery we ought to see the cell-columns developing from the lymph-vessels and spreading out radially.

(7) The columns follow the arrangement of the collagen bundles both as regards thickness, parallelism, and crossing. If the collagen bundles are better developed, we see more regular columns of cells ; if the collagen is poor, the alveolar arrangement of cells is more marked. Thus the columns may be seen more clearly at the periphery, where the collagen exceeds the cells in amount, while at the base, where the collagen is in fine septa, the alveolar form predominates.

(8) The lymph-vessels may be seen as dilated spaces running free between the nævus-cells, and occasionally running horizontally at the base of the growth.

(9) The columns of nævus-cells do not correspond to the appearance produced by the injection of normal lymph-vessels of the skin.

In addition to the above it may be noted that some observers (MacLeod) hold that the lymph-spaces in the normal skin at the level at which the nævus-cells are found have no true endothelial

lining at all, and are simply spaces bounded by collagen bundles with their flattened nuclei, just as the lymph-spaces in the epidermis are bounded by epidermal cells. Johnston (40), however, holds the contrary view, and says that "the lymphatics of the cutis do not cease abruptly in the centre of the papillæ, as is commonly said; they are often continued with an endothelial lining to the base of the epithelium—a thing easy to demonstrate in any œdema of the skin." In reply to Unna's paper, Bauer (41) wrote in favour of von Recklinghausen's idea, and gave the following reasons:

(1) The groups of nævus-cells are separated from the epidermis by a margin of cell-free corium.

(2) The epidermis leaves off with a well-defined edge, even when there is prolongation of the normal interpapillary processes.

(3) The cells in the columns differ in the shape of their nuclei from the epidermal cells, and some show more than one nucleus.

(4) In the connective tissue one meets with two kinds of nuclei: (*a*) typical small connective-tissue nuclei, and (*b*), more rarely, vesicular nuclei, whose cell-body is easily seen when lying in a connective-tissue space. The latter variety is exactly similar to the cells forming the groups in nævi.

(5) It is rare to see cells which are not individually separated by connective tissue.

(6) In some cases the lumen can be seen in the columns.

Unna based his views chiefly on what he found in the young moles in children. He maintained that the origin of the nævus-cells could be definitely traced here, and the process by which the epidermal cells were deposited in the upper part of the corium, to form later the parallel columns, could be seen. Since my own specimens, taken from infants, entirely bear out Unna's view, I will describe the process in full later on. Unna's reproductions, however, do not appear to have convinced his opponents, some (Lubarsch) of whom think that the appearance described as the "cell-nest" is merely due to cutting the section obliquely. Whitfield (42) supports Unna, and draws his conclusions by showing that there is direct continuity between the parallel columns in a mature mole and the cells of the epidermis. He points out that the objection brought by some, that this effect can be produced by faulty cutting and by superimposing one layer of cells over another, can be avoided by photography, in which only one plane can

be in focus at a time, and his reproductions certainly bear out his argument. Johnston (43) has, however, lately attempted to use this same line of argument in favour of von Recklinghausen's view, and maintains that the endothelium of the lymphatics can be seen gradually merging into and directly continuous with the nævus columns: his reproductions, however, do not seem to me to show this, whatever the originals may have done. He also claims to (44) find a lumen in the columns, and says that the lower border is not always sharp, but sometimes shades off into the subjacent corium, with irregular scattered cells. Gilchrist (45) from his examination of young moles supports Unna entirely.

Menahem Hodara (46), in addition to supporting Unna, states that he has seen prickles on the nævus-cells; if this is correct, the epithelial origin is practically certain, since the epidermal cells are the only ones in the body which have prickles; but so far no one has supported him, and I have not seen any suggestion of epithelial fibrils in any of my specimens. Johnston's (47) suggestion that Hodara probably mistook filaments of fibrin for prickles is the probable explanation; and Hodara (48) himself agrees that the "snaring off" of the cells from the epidermis is due to the degeneration of the prickles. Delbanco (49) figures a section which purports to show a cell-nest in the epidermis, and the space in which the cells in the nest are lying is lined with endothelium. The explanation given, that the epidermal cells grow down into the superficial lymphatics, even if correct, would not account for the endothelium being present in the epidermis itself. Darier (50) supports Unna, and says that the nævus-cells are epidermal in origin. Audry (51) says that the epithelial origin of nævus-cells cannot be doubted.

My own specimens in adults, although they show for the most part a thin line of cell-free collagen between the epidermis and the columns in the corium, as Bauer maintains is always present, yet in many places show direct continuity, and there are, in addition, various collections of cells which show the different stages between typical epidermal cells and nævus-cells (see Nos. IV and VI). As regards Johnston's statement that the infiltration of nævus-cells sometimes shades off gradually into the subjacent corium, Numbers III, IV, V, and VI of my series of soft moles all terminate abruptly below, at the level of the sub-papillary plexus, although at the sides

the definition is not always so sharp. Numbers VII and VIII do not show this sudden ending, but neither do they demonstrate the typical columns, and although the cells which they contain have no apparent connection with the lymphatics, I am of the opinion that their origin is probably mesoblastic. The two young moles (Nos. I and II) which were taken from infants show the manner in which the columns of cells in the corium are developed from the epidermal cells. At various points in the prickle-cell layer certain groups of cells break off their connection with the surrounding cells and form a round mass in the space enclosed by prickle-cells. These are the "cell-nests," and the whole process of change which these cells undergo has been spoken of as "metaplasia." If the cells are examined with a one twelfth objective at this stage, they will be seen to take the stain rather more deeply than the neighbouring healthy prickle-cells; they are also more globular in shape, form a more irregular mass, and are not so accurately fitted together as the normal facetted epidermal cells. The nuclei are frequently vesicular, but by no means always.

The cells in the nest are seen to be devoid of prickles, but whether this is congenital and due, as was suggested above, to faulty union of an embryonic cleft, it is impossible to say, as, of course, until the mole is visible to the naked eye one cannot guess in what situation it may arise, and it would be a herculean task to cut sections in the chance of coming across such a spot. The part that pigment plays in the matter will be discussed later, but it is sufficient to mention here that it is seen most marked in the cells forming the nests.

The nests having formed, instead of passing upwards in the normal process of desquamation, for some reason unknown, burst through the intervening epidermal cells below them, and are seen situated on the upper surface of the corium. The young connective-tissue cells at once grow round the nest, cutting it off as if it were a foreign body, and separating it from the epidermis; this is the process that has been spoken of by Unna (52) as "ensnaring." The wound in the basal layer of the epidermis appears to heal, and the whole process is repeated as long as the mole continues to grow. These "snared-off" cells then become collected into parallel columns by the lateral pressure of the collagen, which is usually not seen between the individual cells, although in some parts of my specimens (No. V) this is

evident. Kromayer (53) maintains the rather heretical view that the intervening collagen bundles are manufactured by the columns themselves, which he agrees are of epidermal origin. This seems, on the face of it, very improbable, but in support of the view Loeb (54) maintains that if epithelia are transplanted into connective tissue, metaplasia of these epidermal cells takes place. Clinically, however, in skin-grafting the epidermal cells, at any rate for the most part, remain epidermal.

Occasionally multi-nucleated cells or giant cells are seen amongst the nævus-cells, and this may perhaps be due to fusion, since no mitosis is seen in the nævus-cells. Specimen Number VII shows a large number of giant-cells, but this mole is in all probability not of epidermal origin. In many of my specimens the number of mast-cells is seen to be increased, but what their significance is I cannot say, unless they point to a local œdema. In one specimen (No. V) the accumulation of mast-cells is limited to the area below the mole. I have been unable to detect any mast-cells in the cell-nests, and thereby agree with Unna (55); but they are frequently seen in the collagen between the columns.

As the sequestrated cells pass down into the corium their adherence to each other becomes less, but individually the cells do not show much difference from those in the epidermal nest; the nucleus is still oval, clear, and occasionally vesicular. Although the individual appearance may be of some importance, I agree with Whitfield (56) in placing more reliance on the continuity of the columns with the epidermis, and in tracing the early origin, than in the shape of the nucleus; and he very appropriately quotes Hansemann to the effect that "epithelial character can only mean the juxtaposition of many cells, and the covering of a surface, never a morphological peculiarity of any individual cell."

The conclusions, therefore, which, I think, may be justifiably drawn from the above evidence are that the cells of those soft moles which show the typical columnar formation in the corium are epidermal in origin; but that there does appear to exist a more rare variety of soft mole, which resembles clinically the above, but whose cells are in all probability derived from the mesoblast.

(*To be continued.*)

A CONTRIBUTION TO THE STUDY OF URTICARIA PIGMENTOSA.

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(*Continued from page* 447 *of Vol.* XVII.)

Suggestions as to Etiology.

Notwithstanding the many observers who have studied this disease, there is no general consensus of opinion at the present time as to its etiology. Tilbury Fox, who was one of the earliest writers on the subject, considered it a form of xanthoma, and called it "xanthelasmoidea," a name which, in spite of its cumbrousness, seems preferable to the title introduced by Sangster, which unfortunately implies that it is a form of urticaria. It is interesting to find that Darier, in a recent note on the subject, partially reverts to Tilbury Fox's view, and considers "xanthoma" is its nearest analogue. Darier found in some of his six cases described in that note certain evidences of "liver congestion," and compares the frequency of their association with xanthoma. There is a further analogy in the presence of "typical cells" in xanthoma, as well as in Urticaria pigmentosa, though of course the cells are not of the same kind. None of the cases he records had jaundice,but this was apparently observed by the mother in two of my cases (Obs. 9 and 12) as an early infantile symptom. The suggestion is interesting, but it must be pointed out that xanthoma is a disease of adults, and that "liver congestion" must surely be commoner in older persons than the infants in whom this disease is chiefly found. Various neuroses have been recorded in the family history of subjects of Urticaria pigmentosa, and it has been thought that neurotic causes played a part in the etiology; the symptom of itching and the occasional distribution in nerve-areas have been claimed as supporting this view. It is undeniable that many victims of this disease have had relatives afflicted with nervous affections or been themselves thus affected. For example, in Lazansky's patient "eclampsia" was the cause of death. In Wickham's case a maternal aunt of the patient died of mania. In Perrin's case the mother suffered from urticaria and surgical shock during pregnancy. In Breda's case a sudden

fright in a child brought out this eruption. In one of my own cases the mother was epileptic, and the child who had the disease was certainly neurotic, and apparently had a fresh outbreak of his eruption as result of a fright. In another case the infant who was the subject of Urticaria pigmentosa had also "night-terrors."

Hutchinson's suggestion, ascribing to insect-bites the main etiology, has been mentioned. Many difficulties in the adoption of this explanation will occur to the unprejudiced observer. The record of undoubtedly congenital cases must be remembered as negativing this view. The duration of the individual lesions for many years is surely incompatible with the view that insect-bites can cause them. The distribution is not that of the majority of eruptions due to bites, and finally, the extreme commonness of insect-bites amongst the very poor compared with the great rarity of this disease must be accepted as an *à priori* reason for doubting any causal connection between the two happenings.

Neisser enunciates a most interesting view of the causation, which would bring this disease into line with the nævi, with which, indeed, they present many points of similarity. He says: "I have not the slightest doubt that in Urticaria pigmentosa we have to do with 'Mastzellentumoren'; but how explain the connection between urticaria and the tumour-like formation? I believe that the two conditions, urticaria and tumour-like formations, are two different things, each for itself, and a causal communication between them is not clearly established. The tumours are of an inherited form and disposition, like the embryo-deposits in tumours. The urticaria is only the chance cause of these apparitions" (quoted by Hutchinson in his article describing his atlas cases, New Sydenham Society's publication, *Fasciculus*, viii and ix, p. 85. No reference given).

Connection with urticaria.—It has sometimes been deplored by later writers that the name now universally accepted for the disease implies an association with urticaria, which is certainly "not proven." An initial stumbling-block to the supposition that the lesions of Urticaria pigmentosa are urticarial is naturally found in the persistence of the former, the lesions of urticaria being typically transient and evanescent. It is quite certain that several cases have been recorded as examples of Urticaria pigmentosa which have really been cases of urticaria, in which pigmentation of the lesions has been observed as a

later event. But in the majority of typical undoubted instances of Urticaria pigmentosa the symptoms differ widely from those of urticaria. The disease begins earlier in life than is perhaps usual with urticaria. The sex-incidence is reversed, urticaria being commoner in females, Urticaria pigmentosa in males; intestinal disturbances, which are so often the precursors of urticaria, are rarely recorded in this disease. Itching, which can hardly be imagined as not forming the essential feature of true urticaria, is usually quite moderate and often entirely absent in this disease. Urticaria is at least modifiable by treatment in the great majority of cases, however severe it may be; no treatment seems to have the slightest effect on Urticaria pigmentosa. And the greatest difficulty in accepting any pathological identity, or even similarity, of the two diseases must be felt on investigating the histology, where the complete certainty with which an infiltration of mast-cells may be predicted in Urticaria pigmentosa contrasts with the complete certainty with which the absence of this feature may be predicted in urticaria proper.

With a view to testing the condition of the blood in the two diseases, I have been fortunate in securing the co-operation of a former pupil of my own, Mr. W. Erasmus Paramore, M.A., M.B.Cantab. (Univ. Scholar St. Mary's Hospital), who was at the time engaged in a research on the subject of urticaria for his M.D. thesis at Cambridge. The following investigations were conducted in the laboratory under the direction of Dr. Wright, to whom our united thanks are due.

Mr. Paramore's Investigations.

The blood examinations were conducted with a view to determining, firstly, whether there was present a definite alteration in the content of the blood in its chemical constituents, more particularly with reference to (*a*) the lime and (*b*) the salt content; secondly, whether such alteration was accompanied by, or was independent of, any modification of the red cells themselves which might tend to increase or diminish their resistance towards destructive agents; and lastly, whether the consideration of such alterations, inherent or acquired, might justify the inclusion of these cases under the grouping of urticariæ or might point to a nearer alliance with other forms of disease.

Dr A. E. Wright's methods were used throughout, a brief *résumé* of which is found under the separate headings.

(I) Content of Lime-Salts in the Blood.*

Method.—The determination is made by admixture of equal volumes of freshly-drawn blood from the finger with equal volumes of progressive dilutions of ammonium oxalate made up in physiological salt solution. The volumes of mixed blood and decalcifying solution, taken up into a pipette and separated by bubbles of air from each other, are allowed to stand for twenty-four hours. In the case where the blood has been completely decalcified no clot is formed, the corpuscles falling as a deposit at the bottom of the fluid column; where decalcification is not complete, a clot is produced. Thus an exact estimation of the lime-content of the blood is determined in terms of oxalate of ammonium, from which the mass of lime can itself be deduced. The word "lime" is taken to include both calcium and magnesium.

The Coagulation Time of the Blood.

Wright's coagulation tubes are used. Columns of blood, freshly drawn from the finger, 5 cm. in length, and of a volume equal to that of 5 c.mm. of mercury are exposed to a temperature of 37° C. in a water-bath. The coagulation tubes are removed from the water-bath, the first after an interval of thirty seconds, the second after forty-five seconds, the third after one minute, and so on. The contents, after removal of the tube, are immediately expressed on to blotting-paper, the time at which the first trace of fibrin formation is noted being taken as the coagulation time of the blood.

The lime-content of the blood as determined by the above method is displayed in Table I; reference to the latter will show that this content is in every case large.

No absolute normal can be given for comparison, but a normal for a particular diet and a particular individual is possible. For non-milk-drinkers the normal is equal to $\frac{1}{1500}$ oxalate of ammonium with a coagulation time of one minute and forty-five seconds (Wright). Other things being equal, the rate of coagulation bears a direct relation to the content of lime-salts in the blood: the shortening of the time here found is in correspondence with the large lime-content, except in Cases 4 and 12. In these two cases the coagulation time is prolonged relatively to the content of lime-salts in the blood: this prolongation may possibly be due to the presence of an excess of lime. Partial explanation of the large lime-content

* The *Lancet*, Oct. 14th, 1904, p. 1096.

present in these cases of Urticaria pigmentosa is perhaps to be found in the dietary of the patients—a large lime-content with a short coagulation time being a characteristic of a milk dietary. The patients, all of whom were of tender age (one and a half years to eleven years), may be presumed to have had such a dietary, not milk solely, but in addition to other food.

(B) *The salt-content.*—No absolute determination was made, but a comparison between the hæmosozic value of the patient's serum and the presumed normal is exhibited in Table III. The salt-content is in every case large, in Observations 1 and 9 remarkably so. The mean of four presumed normals was found equal to 6·7-fold dilution.

Method.—Freshly drawn blood from the finger was taken up into capsules, allowed to clot, centrifugalised, and the serum obtained. Progressive dilutions of this serum were made with distilled water, giving three-, four-, and five-fold dilutions, etc.

As a convenient index by use of which contrast was possible the resistance of my own red corpuscles to hæmolysis was taken, the blood being freshly drawn from a finger-prick for each observation.

Two volumes of diluted serum and one volume of blood were intimately mixed on a slide and drawn up into a capillary pipette, the dilution of serum effecting complete hæmolysis, as evidenced by translucency, being taken as a measure of the hæmosozic value of the serum.

(II) The Red Blood-Corpuscles.

The red cells were examined with a view to investigating modifications in their resistance to destructive agents—*e. g.* heat, cold, distilled water.

Method.—The blood was received into citrated soda solution to prevent clotting, centrifugalised, washed in $\frac{N}{10}$ saline, and the corpuscles finally obtained suspended in the least possible quantity of $\frac{N}{10}$ saline. Thus uniformity of composition in the suspending fluid was obtained such that any observed alteration in the corpuscle's resistance should be due to a modification of the corpuscle itself and not to the fluid in which it was suspended. The corpuscles were next exposed to a given temperature of 0° C., 18° C., or 37° C.

Lastly, equal volumes of corpuscles were intimately mixed with twice their volume of progressive dilutions of normal saline, the dilution effecting complete hæmolysis being taken as a measure of the resistance of the corpuscles.

Exposure of the suspended corpuscles to heat alone revealed no

difference between the abnormal and the normal blood, breaking down of the cells occurring at 47° C.–50° C. The data obtained at lower temperatures will be found in Table VI. Considerable variety was noted in the behaviour of the corpuscles, the resistance on the whole being increased—in observations IV, X, XI noticeably so, the remaining cases showing an increased resistance after exposure to certain temperatures.

A Comparative Study of these Elements of the Blood both in Urticaria Pigmentosa and other Forms of Disease.

The modifications present in Urticaria pigmentosa are an increased content of the blood in lime and salts, together with an alteration in the red cells, leading to an increase in their resistance towards destructive agents.

*Contrast between Urticaria Pigmentosa and the various Forms of Urticaria in Respect of the Content of Lime-Salts in the Blood.**

Wright first pointed out that many cases of urticaria are associated with defective blood-coagulability; in these cases he found a deficiency of lime-salts. By rectifying such deficiency by the exploitation of calcium he succeeded in effecting a cure. To these cases he has given the name of "decalcification urticaria"; the cases displayed in Table II may be considered as belonging to this class. Urticaria pigmentosa is seen to be sharply marked off from this group, exhibiting, indeed, the reverse characteristics.

Case B—, Table II, is of interest since the large content of lime-salts in the blood and proportionately shortened coagulation time which were found when the patient was first examined—thus presenting a superficial resemblance to the conditions found in Urticaria pigmentosa —remained constant for three weeks. The lime-content then suddenly dropped to half its previous value, the coagulation time being at the

* "Association of Serous Hæmorrhages with conditions of Defective Blood-Coagulability," The *Lancet*, September 19th, 1896. "Two Cases of Urticaria treated by the Administration of Calcium Chloride," *Brit. Journ. Dermat.*, No. 89, vol. viii. "Discussion on Blood in Disease," *Path. Soc. Trans.*, vol. i, Part III, 1900.

same time delayed. Coincidently with this drop in the lime-content the patient was attacked with urticaria.

In Table II A are found a number of cases which more nearly approximate to the conditions noted in Table I, the coagulation time, though shortened, not being sufficiently so relatively to the content of the lime-salts in blood.

In case W. B— the patient for some days before examination had been under treatment with Hyd. cum creta, the latter affording a satisfactory explanation of the presence of a *quantum* of lime in the blood which would be sufficient to prolong the coagulation time.

In cases T. H— and W. M— it is possible that, if opportunity for repeated examination had been present, a diminution of the lime-content would have been found concurrently with the onset of symptoms, as in Case B—, Table II.

In cases S— and H—, Table II, the experimental exhibition of a calcium salt did not allay the condition; under treatment the typical lesions were present, with a large lime-content.

The practical Result of a large Salt-Content.

In considering what application the relatively high salt-content of the blood might have on the condition under examination a further series of experiments was undertaken in which known quantities of chemically pure salt were added to normal and abnormal blood *in vitro* and the clotting power of the resultant mixture examined.

Method.—Equal volumes of dilutions of chemically normal saline, $\frac{N}{10}$, $\frac{N}{20}$, $\frac{N}{30}$, $\frac{N}{40}$, $\frac{N}{50}$, etc., were mixed, each with an equal volume of blood, the resulting mixtures, separated by bubbles of air each from each, taken up into a capillary (glass) pipette, and allowed to stand from six to eight hours at the room temperature. At the end of this period the pipette was divided by a glass-cutting knife between each of the columns of mixed blood and saline, each column blown out separately on to a filter-paper, and the occurrence or non-occurrence of a clot noted. By this method not only is salt added, but also by the dilution the original constituents of the blood are halved; for purposes of comparison the error is the same in all cases.

Perusal of Table IV will show that the salt-content of the blood which is best adapted for clot-formation varies, being dependent on

other factors. One of these factors is the lime-content. Case H—, Table IV, was under treatment with calcium at the time the observations were made, while Cases W. E. P—, G—, and S— were not. But, other things being equal, an increase in the salt-content of the blood of even a small amount (·02 per cent. to ·3 per cent. in the cases quoted) may lead in a subject already possessed of a large salt content to an impairment or even a prevention of clot-formation.

Moreover, in Case H— it is found that in a blood having a large lime-content a greater *quantum* of salt may be added without impairment of clot than in a blood not so possessed, as in case W. E. P—. If in a blood of this kind the lime-content be reduced, *e.g.* by one half, the salt-content will now be sufficient to prevent clot-formation.

In consequence we may expect to find that in patients with a large content of salts in the blood hæmorrhage may readily occur; Table V may serve to illustrate this point. Cases 1, 2, and 4 had suffered from severe, Cases 3 and 5 from small, hæmorrhages. In view of the increased content of salts in the blood, an attempt was made to determine if the increased resistance of the corpuscles could be considered as a resultant of a sojourn in a fluid so constituted. Equal volumes of suspended normal corpuscles were added to a large excess of N-saline, $\frac{N}{5}$ saline, $\frac{N}{10}$ saline respectively. The resulting mixtures, well shaken to secure uniform distribution of the corpuscles were incubated for three hours at 37° C. Hæmolysis was found to take place in each mixture; only occasionally $\frac{N}{10}$ saline mixture escaped.

On this ground it was presumed that the increased resistance of the corpuscle was not due to a sojourn in a fluid possessed of a high salt-content.

Lastly, patients the subjects of other diseases were examined with a view to the occurrence of a similar increase of resistance in the red cells.

The results are embodied in Table VII. It is there seen that Cases G—, J. R—, W. J. S— are found with the same increase in the resistance of the corpuscle, and that Case A. J— shows an increased resistance after exposure to a temperature of 0° C. for one hour. Of interest in this connection is the fact that Cases G— and W. J. S—

were found in Table V to be possessed of an increased content of the salts in the blood.

Conclusions.—In Urticaria pigmentosa there is, then, a definite modification in the red blood-corpuscles, tending to increase its resistance to destructive agents. The salt-content of the blood is increased, the content in lime-salts is at least not diminished. From decalcification urticaria it is clearly separated by this absence of diminution in the lime-content.

That urticaria may in some cases be due to a modification in the salt-content of the blood is possible, but in view of the fact that all the characteristics found in the blood in Urticaria pigmentosa have also been found in cases of hæmophilia, purpura, etc., it seems plausible to consider the disease as more akin to the so-called blood diseases or perhaps as occupying an intermediate position between the purpuric condition and the urticarias.

TABLE I.—*Examination of the Blood with Respect to the Content of Lime-Salts, compared with the Coagulation Time in Cases of Urticaria Pigmentosa.*

Observation.		Date of examination.	Coagulation time.	Dilution of oxalate of ammonium in physiological salt solution which just sufficed to effect complete decalcification of the blood.
I.	A. B.	Aug. 29th, 1905	25 seconds	$\frac{1}{1050}$
II.	L. C.	July 27th, 1905	37 seconds	$\frac{1}{600}$
III.	A. P.	July 27th, 1905	33 seconds	$\frac{1}{750}$
IV.	C. B.	Aug. 21st, 1905	52 seconds	$\frac{1}{750}$
IX.	G. W.	Aug. 29th, 1905	41 seconds	$\frac{1}{1050}$
X.	R. F.	Aug. 29th, 1905	32 seconds	$\frac{1}{1050}$
XI.	E. F.	Aug. 31st, 1905	37 seconds	$\frac{1}{750}$
XII.	H. C.	Aug. 31st, 1905	52 seconds	$\frac{1}{1050}$

TABLE II.—*Examination of the Blood with respect to the Content of Lime-Salts, compared with the Coagulation Time in Cases of Urticaria.*

	Date of examination.	Coagulation time.	Dilution of oxalate of ammonium in physiological salt solution which just sufficed to effect complete decalcification of the blood.	Remarks.
S.	April 29th, 1905	2 mins. 30 secs.	$\frac{1}{1500}$	Giant urticaria
H.	May 3rd, 1905	2 mins. 15 secs.	$\frac{1}{1500}$	Urticaria produced by vaccination
de V. K.	Feb. 20th, 1905	2 mins.	$\frac{1}{1500}$	Urticaria
de V. K.	May 16th, 1905	2 mins.	$\frac{1}{1500}$	Urticaria
F.	July 5th, 1905	2 mins. 15 secs.	$\frac{1}{1500}$	Angio-neurotic œdema
B.	Aug. 7th, 1905	45 secs.	$\frac{1}{750}$	Between two attacks
—	Aug. 20th, 1905	1 min. 30 secs.	$\frac{1}{1500}$	During an attack

TABLE II A.—*Cases of Urticaria and allied Conditions which show a Resemblance to Urticaria Pigmentosa with respect to the Lime-Content of the Blood.*

	Date of examination.	Coagulation time.	Dilution of oxalate of ammonium in physiological salt solution which just sufficed to effect complete decalcification of the blood.	Diagnosis.
T. H.	July 20th, 1905	1 min. 22 secs.	$\frac{1}{1050}$	Urticaria
W. B.	Sept. 14th, 1905	52 secs.	$\frac{1}{600}$	Erythema multiforme
E. P.	July 20th, 1905	55 secs.	$\frac{1}{750}$	Erythema multiforme
W. M.	May, 1905	1 min. 20 secs.	$\frac{1}{1050}$	Urticaria
H.	Sept. 25th, 1905	1 min.	—	Chronic urticaria

TABLE III.—*Examination of the Blood with respect to its Hæmosozic Value.*

Observation.	Initials.	Age.	Date of examination.	Dilution of the serum with distilled water which effected complete hæmolysis.
I	A. B.	2 years	Aug. 29th, 1905	Ninefold
IV	C. B.	1½ years	Aug. 21st, 1905	Eightfold
IX	G. W.	5 years	Aug. 29th, 1905	Tenfold
X	R. F.	11 years	Aug. 29th, 1905	Eightfold
XI	E. F.	9 years	Aug. 31st, 1905	Eightfold
XII	H. C.	3¾ years	Aug. 31st, 1905	Eightfold

TABLE IV.—*Exemplification of the Relation of Salt-Content to Clot-Formation.*

	Percentage of added salt.	W. E. P. Normal man.	G. Hæmophilia.	S. Bright's disease.	H. Œdema retinæ; Bright's.
1 vol. of blood					
+ 1 vol. N NaCl	5·85	—	—	—	—
+ 1 vol. $\frac{N}{5}$ NaCl	1·17	—	—	—	—
+ 1 vol. $\frac{N}{10}$ NaCl	·585	—	Trace	Trace	—
+ 1 vol. $\frac{N}{15}$ NaCl	·395	—	Trace	Trace	Clot
+ 1 vol. $\frac{N}{20}$ NaCl	·292	—	Trace	Trace	Clot
+ 1 vol. $\frac{N}{30}$ NaCl	·195	Trace	Clot	Clot	Trace
+ 1 vol. $\frac{N}{35}$ NaCl	·170	Clot	Clot	Clot	Trace
+ 1 vol. $\frac{N}{40}$ NaCl	·146	—	Clot	Clot	Trace
+ 1 vol. $\frac{N}{50}$ NaCl	·117	—	Clot	Clot	Trace
+ 1 vol. $\frac{N}{60}$ NaCl	·097	—	Clot	—	Trace
+ 1 vol. $\frac{N}{90}$ NaCl	·065	—	—	—	—
Date of examination . .		July 28, 1905	Sept. 7, 1905		Sept. 4, 1905

TABLE V.—*Diseased Conditions in which a large Salt-Content of the Blood was accompanied by Hæmorrhage.*

Case.	Initial.	Diagnosis.	Dilution of serum with distilled water, which effected complete hæmolysis.	Date of examination.	Remarks.
1	G.	Hæmophilia	Nine-fold	Aug. 23rd, '05	Constantly bleeding
2	P.	Hæmophilia	Eight-fold	Aug. 29th, '05	Sub-periosteal hæmorrhage
3	W. J. S.	Pernicious anæmia	Ten-fold	Sept. 5th, '05	—
4	C. M.	Acute nephritis	Ten-fold	Sept. 5th, '05	—
5	G.	Bullous purpura	Eight-fold	Sept. 17th, '05	—

TABLE VI.—*Examination of the Blood with Respect to the Resistance of the red Cells in Cases of Urticaria Pigmentosa.*

Observation.	Initial.	Age.	Date of examination.	Dilution of chemically normal saline which just sufficed to effect complete hæmolysis after exposure for one hour at		
				0° C.	18° C.	37° C.
I	A. B.	2 years	Aug. 28th, 1905	$\frac{N}{30}$	$\frac{N}{50}$	$\frac{N}{20}$
IV	C. B.	1½ years	Aug. 21st, 1905		$\frac{N}{150}$	
IX	G. W.	5 years	Aug. 28th, 1905	$\frac{N}{50}$	$\frac{N}{20}$	$\frac{N}{20}$
X	R. F.	11 years	Aug. 28th, 1905	$\frac{N}{40}$	$\frac{N}{40}$	$\frac{N}{30}$
XI	E. F.	9 years	Aug. 31st, 1905	$\frac{N}{40}$	$\frac{N}{50}$	$\frac{N}{40}$
XII	H. C.	3¾ years	Aug. 31st, 1905	$\frac{N}{20}$	$\frac{N}{40}$	$\frac{N}{50}$
	Normal			$\frac{N}{20}$ to $\frac{N}{30}$	$\frac{N}{20}$ to $\frac{N}{30}$	$\frac{N}{20}$ to $\frac{N}{30}$

TABLE VII.—*Examination of the Blood with Respect to the Resistance of the red Cells in Cases of Hæmophilia, Purpura, etc.*

Observation.	Date of examination.	Dilution of chemically normal saline which just sufficed to effect complete hæmolysis after exposure for one hour at			Diagnosis.
		0° C.	18° C.	37° C.	
P., Case II, Table V	Aug. 30th, 1905	$\frac{N}{20}$	$\frac{N}{20}$	$\frac{N}{20}$	Hæmophilia
G., Case I, Table II	Aug. 23rd, 1905	$\frac{N}{70}$	$\frac{N}{50}$	$\frac{N}{50}$	Hæmophilia
J. R.	Aug. 25th, 1905	$\frac{N}{40}$	$\frac{N}{50}$	$\frac{N}{50}$	Purpura
A. J.	Aug. 30th, 1905	$\frac{N}{40}$	$\frac{N}{20}$	$\frac{N}{20}$	Lymphadenoma
W. J. S., Case III, Table V	Sept. 6th, 1905	$\frac{N}{30}$	$\frac{N}{40}$	$\frac{N}{40}$	Pernicious anæmia

(End of Mr. Paramore's Contribution.)

The frequent onset of the disease so early in life has naturally suggested that the causation is to be sought in congenital conditions which, though commonly not noticeable at birth, become evident some time later. A parallel experience is found in ichthyosis, a typically congenital affection which is, nevertheless, not usually observed until the child is several months old. Some support for such an hypothesis is afforded by the following experiments, in which the findings would indicate that there is in Urticaria pigmentosa a permanent general tendency to produce mast-cells in the skin in abnormal profusion.

(1) In the case of L. C— (Observation 2) a section of skin was obtained from the arm in a site which appeared absolutely normal, and as remote as possible from any macules. This case was especially chosen because the macules were very distinct, the skin was exceptionally fair, and the patient was of a peculiarly phlegmatic disposition. The results showed an infiltration of mast-cells round the blood-vessels, sweat-ducts, and hair-follicle, which was comparable in degree to the conditions present in the section pictured in Fig. 18, from Observation 11—that is, from a lesion which was clinically typical. Pigment-cells were observable both in the dorsal layer of the rete and in several superposed layers, but to a less degree than in the section from the actual macules. (But in this case the pigment was exceptionally abundant and dark in colour in the section cut from the macule itself.)

(2) In the case of Cecil B— (Observation 4) a portion of what appeared to be perfectly healthy skin from the leg was examined. In this case the lesions of the disease were exclusively nodular, and they were few and far between, so that there was little likelihood of mistaking diseased for healthy skin. The section showed little or no pigmentation, but considerable infiltration with mast-cells, restricted to the vessels and the neighbourhood of the hair-shafts and sweat-glands and ducts. The absence of pigmentation in the second instance may be connected with the circumstance that in this case even in the sections of the darkest-coloured nodule the pigment-granules were scanty.

(3) Since undertaking these two experiments, I have become aware that Gilchrist found a very similar state of things in a case of Urticaria pigmentosa, in which he examined portions of skin excised (1)

from normal skin, (2) from a wheal produced by scratching the normal skin with the finger and excising four, eight, and twenty minutes respectively after the formation of the wheal. In the first instance he found more mast-cells than usual, but scattered through the skin and around the vessels; in the second instance he found that the mast-cells were increased in number by the wheal-formation, and became progressively more numerous as the interval after excision in the three experiments increased. Gilchrist mentions an hypothesis suggested to him by Welch, in consideration of these experiments, that there was in patients suffering from Urticaria pigmentosa a toxæmic condition of the blood, and when the skin was stimulated the toxins were set free into the tissues.

From the experiments cited it seems to be a justifiable inference that there is a general tendency, probably congenital, to over-production of mast-cells in the skin of patients suffering from Urticaria pigmentosa. The local excessive accumulation (clinically represented by macules or nodules) may be determined, as the clinical experience would indicate, by various accidental phenomena—vaccination, varicella, urticarial lesions, even an emotional stimulus, such as fright (Observation 9, also Breda's case), acting upon a skin already fundamentally abnormal.

In what this abnormality consists remains, of course, unexplained. The manner of the infiltration with mast-cells suggests a close relation with blood changes, and it is interesting that the researches undertaken by Mr. Paramore tend to show that, in the cases examined, there were certain characteristics which appeared to be common to all the cases of Urticaria pigmentosa, and which brought them into line with results obtained in a class of blood diseases including hæmophilia, pernicious anæmia, and lymphadenoma; these researches are as yet hardly more than at their inception, but it is in this direction that success in solving the problem of causation probably lies.

APPENDIX.

English Cases.

Reference.	Observer.	Age at onset.	Sex.	Type of disease.	Histology.	Interval between onset and date of report.	Colour of lesions.	Itching.	General remarks. Distribution; glands; scars, etc.
Raymond, thesis on *Urticaria Pigmentosa*	Tilbury Fox	6 weeks	M.	Macular	No record traced	—	Brown-red to copper	No itching	—
Ibid.	Nettleship	3 mos.	F.	„	„	2 years	Brown	Moderate	Blonde; face not affected.
Ibid.	Morrant Baker	6 mos.	M.	Mac. and nod.	„	3 „	Pink to dull red	„	Slight on face; palms and soles free; mucosa free.
Ibid.	Tilbury Fox	6 weeks	M.	Nodular	„	18 „	Dull red to buff	„	General distribution, including face, palms, soles, and buccal mucosa.
Ibid.	Brodie	6 weeks	M.	Macular	„	10 „	Dull red	No itching	Face affected.
Ibid.	Hibblethwaite	10 days	M.	Nodular	„	?	Coppery	Moderate	Face affected.
Ibid.	Barlow	3 mos.	F.	Macular	„	10 months	Brown, with dash of olive	?	Face affected.
Ibid.	Sangster	2 mos.	M.	„	„	2 years	Buff-brown, buff-red	Considerable	A few spots on cheek.
Ibid.	Barlow	9 weeks	M.	„	„	8 months	Brownish drab	Severe	Extensive distribution; spots on temple, not face.
Ibid.	Goodhart	5 mos.	F.	„	„	2 „	Deep brown	Moderate	Face, hands, and feet free.
Ibid.	Pye-Smith	3 mos.	M.	Nodular	„	2 years	Yellow-brown	?	Hands, feet, and face free.
Ibid.	Mackenzie	3 days	M.	Macular	„	14 „	Dark brown to buff	Severe	Face free, mucosa free.
Ibid.	„	3 days	?	„	„	16 months	Buff-coloured	None	Spots on forehead.
Ibid.	Propert	5 weeks	M.	Mac. and nod.	„	3 years	Copper-coloured	Moderate	Face affected.
Ibid.	Cavafy	14 days	M.	Macular	„	2 „	Red-yellow	None	Face affected; blonde complexion.
Brit. Journ. Derm., 1895	Pringle	3 mos.	M.	Mac. and nod.	„	9 months	Brown	„	Face, palms, and soles free.
Ibid., 1895	Clifford	3 mos.	M.	„	„	9 years	Yellow-brown	Moderate	Face, palms, and soles affected.
Ibid., 1895	Adamson	2 weeks	M.	Macular	„	15 months	"*Café au lait*"	None	Face affected.
Ibid., 1896	Colcott Fox	Infancy	F.	„	„	6 years	Tawny	„	Face free.
Ibid., 1897	„	5 mos.	M.	„	„	13 months	Fawn-coloured	„	Face affected.
Ibid., 1898	„	15 years	M.	Nod. and mac.	Mast-cells demonstrated	3 years	Very dark	„	Face affected.

Ibid., 1896	Perry	3 mos.	M.	Macular	No record	3 „	?	Moderate	Face affected; palms and soles free.	
Ibid., 1897	Galloway	3 mos.	M.	„	Mast-cells demd.	2½ „	Brownish red	?	—	
Int. Congr., 1881	Liveing	14 years	F.	„	—	1½ „	—	—	—	
Brit. Journ. Derm.	Colcott Fox	1 year	F.	„	No record	?	Dark macules	?	Trunk only.	
Ibid., 1899	Galloway and Brongersma	6 weeks	M.	„	Mast-cells found	18 years	Brownish red	Severe	Blonde complexion; bullæ were present; scars resulted.	
Ibid., 1900	Jaffrey	4 mos.	M.	„	No record	3 „	?	None	Relative disappearance after measles (compare Obs. 8, E. W—).	
Ibid., 1901	Morris	Adult	M.	„	„	—	Reddish brown	—	Scars present.	
Ibid., 1892	Mackenzie	23 years	M.	„	—	—	—	—	—	
Ibid., 1901	Pringle	6 weeks	F.	„	—	6 years	Lemon-yellow	—	—	
Ibid., 1903	Galloway	A few days old	M.	Nod. and mac.	„	2 „	Brownish	Moderate	—	
Ibid., 1903	Eddowes	28 years	M.	„	Mast-cells found	2 „	Brown, nearly black	—	—	
Ibid., 1904	Adamson	4 mos.	M.	Macular	No record	2 „	Deep yellow-brown	Moderate	—	
Ibid., 1904	Savill	Few mos.	M.	„	—	6 „	—	—	—	
Ibid., 1904	Rutherford	14 years	M.	Nod. and mac.	Mast-cells found	3-4 years	Red	—	—	
Derm. Atlas	Radcliffe-Crocker	5 weeks	M.	Nodular	No record	11 months	Lemon-yellow	No itching	Face, palms, and soles affected; bullæ present.	
New Sydenham Soc. Atlas	Hutchinson	3 years	F.	Macular	„	12 years	Brown	None	Trunk and shoulders only; fair complexion.	
Fasciculus viii	„	6 mos.	M.	Mac. and nod.	„	10 „	Dark brown	—	Scars; eruption partial; face especially attacked; disappeared in ten years.	
Ibid.	„	14 years	M.	Nodular	„	5 „	Dusky brown	None	Face attacked later; palms affected, soles free.	
Brit. Journ. Derm., 1894, p. 235	Radcliffe-Crocker	5 years	M.	„	„	4 „	Brown-red	Moderate	Trunk only; factitious urticaria present.	
Ibid., 1891	Wallace Beatty	14 years	M.	Mac. and nod.	„	1 „	Brown	—	Two brothers; white spots, possibly scars.	
Ibid., 1891	„	11 years	M.	„	„	1 „	„	—		

English cases—continued.

Reference.	Observer.	Age at onset.	Sex.	Type of disease.	Histology.	Interval between onset and date of report.	Colour of lesions.	Itching.	General remarks. Distribution; glands; scars, etc.
Brit. Journ. Derm., 1891	Wallace Beatty	23 years	F.	Mac. and nod.	No record	Some months	Red spots, becoming brown	No itching	Had urticaria first, then, independently, cutaneous pigmentosa lesions.
Ibid., 1898	Colcott Fox	1 year	F.	Macular	,,	1½ years	Dark-coloured	Moderate	Very fair complexion; onset after varicella.
Proc. 3rd Congress, 1896	Radcliffe-Crocker	8 years	M.	Nodular	,,	4 ,,	Red papules	No itching	—
Text-book, p. 139	,,	3 weeks	?	,,	,,	Under 12 months	Lemon-yellow	?	Lesion disappeared before age of 1 year, leaving scars.
A. B., Obs. 1	Graham Little	6 weeks	F.	Macular	Mast-cells found	2 years	Chamois leather	None	Forehead and temples, face otherwise free; came out within one week after vaccination.
L. C., ,, 2	,,	14 days	F.	,,	,,	3 ,,	Light brown	Very slight	Face affected.
A. P., ,, 3	,,	2 mos.	M.	,,	,,	3 ,,	Light to dark brown	None	Face affected; tubercular bone-disease.
C. B., ,, 4	,,	3 weeks	M.	Nodular	,,	12 months	Dark brown walnut	Present	Face free.
T. M., ,, 5	,,	14 days	M.	Macular	,,	9 years	Faint brown	None	Face free.
D. R., ,, 6	,,	1 week	M.	,,	No biopsy	4 ,,	Buff-yellow	,,	Face free.
E. S., ,, 7	,,	4 mos.	F.	,,	,,	3 ,,	Dark wash-leather	Moderate	Rickets and night terrors as well; face free.
E. W., ,, 8	,,	At birth	M.	Nodular	Mast-cells	2 ,,	Dark brown	None	Nodules flattened after attack of measles.
G. W., ,, 9	,,	14 days	M.	Macular	,,	5 ,,	Reddish brown	,,	—
R. F., ,, 10	,,	6 mos.	M.	,,	,,	11 ,,	Milky-coffee-coloured	,,	Face, palms, and soles free; neurotic family history.
E. F., ,, 11	,,	3 mos.	F.	,,	,,	9 ,,	Lemon-yellow	,,	Only two lesions throughout observation of nine years.
H. C., ,, 12	,,	3 mos.	F.	,,	,,	3 ,,	Dusky brown-red	,,	Blonde.
G., ,, 13	,,	33 years	F.	,,	,,	4 ,,	"*Café au lait*"	Moderate	Diagnosis not entirely clear; case abnormal in many respects.
H. M., ,, 14	Graham Little	Con-genital	M.	Nod. and mac.	No biopsy	11 ,,	Deep brown	No itching	Head and face, limbs and thigh affected.

Raymond, *Thesis*	Morrow	6 mos.	M.	Nodular	No record	22 years	Pink to yellowish brown	Severe	Buccal mucosa affected.
Journ. Cut. Dis., 1884	G. H. Fox	18 mos.	F.	Macular	„	4 „	"*Café au lait*"	Moderate	Face free.
Johns Hopkins Bull., vol. vii	Gilchrist	2 mos.	M.	Mac. and nod.	Mast-cells found	17 months	Yellowish fawn	Severe	Universal—face, palms, and soles.
Ann., 1899	Stelwagon	18 mos.	M.	„	No record	5 years	Yellowish salmon	None	Blonde complexion.
Ibid., 1899	„	3½ mos.	F.	Macular	„	11 „	Yellow	„	—
Ibid., 1899	„	3 mos.	F.	Nodular	„	8 „	Yellow-salmon	Moderate	—
Ibid., 1899	Robinson	16 years	M.	Mac. and nod.	„	5 „	Reddish	„	Recurrent attacks.
Ibid., 1894	Bronson	5 mos.	M.	?	„	2 „	—	—	—
Journ. Cut. Dis., 1891	Elliott	27 years	M.	Mac. and nod.	Mast-cells found	5 „	—	None	—
Ibid., 1891	Goldenberg	2 years	F.	Macular	„	?	Yellow	?	Face affected.
Ibid., 1891	Taylor	3 mos.	M.	„	„	?	Dark brown	Moderate	„
Ibid., 1891	„	Infancy	M.	„	„	3 years	Brown to chocolate	„	—
Ann., 1901	Woldert	3 mos.	M.	„	„	?	Reddish brown	—	Onset immediately after varicella.
Mon., 1901	Small	4 weeks	M.	Mac. and nod.	„	17 months	Brown-red	—	—
Ann., 1841, p. 112	Cutler	3 weeks	F.	Macular	„	18 years	Pigmentations	None	Face affected; English parentage; came on after measles.
Mon., 1894 p. 471	Sherwell	18 mos.	M.	„	„	23 „	Dark brown to deep red	„	—

German and Austrian Cases.

Raymond, Thesis	Pick	6 weeks	F.	Mac. and nod.	No record	8 years	Brown-yellow	Moderate	Blonde complexion and hair; blue eyes.
„	„	Few days	M.	„	„	7 months	Sulphur yellow	None	Face affected; blonde hair; grey eyes.
„	Lewinski	5 weeks	M.	„	„	18 years	Pale yellow	Severe	Face, palms, and soles affected; blonde colouring.
„	„	4 mos.	F.	„	„	1 year	Brown-red	Moderate	Face affected.
„	„	10 mos.	F.	Macular	„	9 years	„	—	Eight fresh attacks recorded, ceasing at 9 years.

German and Austrian cases—continued.

Reference.	Observer.	Age at onset.	Sex.	Type of disease.	Histology.	Interval between onset and date of report.	Colour of lesions.	Itching.	General remarks. Distribution; glands; scars, etc.
Raymond, Thesis	Behrend	9 mos.	F.	Mac. and nod.	No record	1 year	Pale red	?	Child died early infancy from diarrhœa.
„	„	2 years	M.	Macular	„	—	"*Taches pigmentées*"	?	Child died early infancy from eclampsia.
„	Lazansky	10 mos.	F.	„	„	3 years	Deep red to brown	None	Onset immediately after vaccination; face free.
Monats., 1902	Blumer	Infancy	M.	„	Mast-cells found	40 „	Copper-brown	Moderate	Face affected.
Ibid.	„	16 years	F.	Mac. and nod.	„	15 „	Yellowish brown	?	Face free.
Ibid., 1887	Unna	3 mos.	M.	Macular	„	5 „	Brown	Moderate	Face affected.
Arch., vol. xxxiv	Bäumer	Early childhood	M.	„	„	?	Brown-red	„	„
Ibid., vol. xl, p. 13	Rona	6-7years	M.	„	„	20 years	Dark brown	„	Face free.
Ann., 1894	Joseph	Infancy	M.	?	„	19 „	Reddish	„	—
Arch., 1888	Elsenberg	6 weeks	M.	Mac. and nod.	Mast-cells, pigment cells in corium	2½ „	Reddish brown	„	Face affected; buccal mucous membrane also.
Monats., 1903	Reiss	Congenital	M.	Macular	Mast-cells	4 „	Red-brown	None	Blonde complexion.
Ibid., 1889, p. 472	Touton	2 years	M.	„	No record	6 months	Yellow to coffee colour	—	Attacks commenced with fever.
Arch., vol. xl	Winternitz	5 weeks	M.	Mac. and nod.	„	?	Brownish yellow	—	—
Wien. Med. Woch., 1886	Kaposi	13½ years	F.	Macular	„	?	Red	—	Brunette in complexion.
Ann., 1901	Lesser	37 years	F.	„	Mast-cells not found	6 months	Deep brown	—	—
Arch., vol. liii, 1900	Raab	Congenital	M.	„	Mast-cells	9 „	Reddish	Moderate	—
Ann., 1894	Fabry	Infancy	M.	„	Mast-cells and hæmor-	19 years	Brown	„	—

xviii. p. 172				nod.					
Ibid.	„	8–10 years	F.	Macular	„	34 „	Brown-red	None	Face affected; factitious urticaria present.
Ibid., 1890, p. 311	Doutrelepont	6 weeks	F.	Mac. and nod.	„	9 „	Dirty brown	„	Face affected; submaxillary and cervical glands swollen.
Ibid., 1905, p. 73	Nobl	4 mos.	M.	„	„	2 „	Brown red	„	Face affected.
Ibid., vol. xxi, p. 146	Isaak	7 mos.	?	Macular	—	—	„	—	Glands enlarged; mistaken for syphilis.

French Cases.

Raymond, Thesis	Feulard	4½ mos.	F.	Nod. and mac.	No record	5 years	Brownish, coffee	Severe	Face affected, mucosa free, and glands enlarged.
„	Vidal	2 mos.	M.	„	„	3 „	Yellow to copper	„	Face and eyelids affected; no glands.
„	Quinquaud	18 mos.	F.	Mac. and nod.	„	—	Yellow-brown	Moderate	—
„	Fournier	6 weeks	M.	„	Mast-cells found	3 years	Pale yellow, pink, violet	Severe	Face, palms, and soles affected, very extensive distribution; numerous bullæ; mucosa not affected.
Ann., 1894	Feulard	3 mos.	M.	„	No record	3 „	Yellow-brown	Moderate	Glands enlarged, face free.
Ibid., 1894	Derville	6 weeks	F.	„	„	10 months	Yellowish	Severe	Hands, feet, and mucosa free; enlarged glands in neck, axillæ, and groin.
Ibid., 1894	—	—	—	—	Hæmorrhages found	—	—	—	—
Ibid., 1896	Hallopeau	Adult	M.	Macular	No record	2 years	Reddish-yellow	Moderate	Scars present, face free.
Ibid., 1896	Dubrisay Thibierge	Few days	M.	„	„	18 months	Red-brown	None	Face affected, child free of eruption at birth.
Ibid., 1898	Balzer	6 years	F.	Mac. and nod.	„	18 „	Brown	Severe	Face free.
Ibid., 1899	Jacquet	Infancy	M.	?	?	10 years	?	Moderate	—
Ibid., 1899	Balzer	6 mos.	M.	Macular	No record	6 months	Brown-yellow	None	Confined to face.
Ibid., 1886	Wickham and Thibaut	6 weeks	F.	„	„	2 years	Light brown	„	Face affected; maternal aunt had mania.
Ibid., 1886	„	3½ mos.	M.	„	„	2 „	Pale pink to "*café au lait*"	„	Blonde complexion; face affected.
Ibid., 1905	Darier	6 years	F.	Macular	Mast-cells found	50 years	—	Moderate	Not on head, legs, or extremities. Duration 50 years.

French cases—continued.

Reference.	Observer.	Age at onset.	Sex.	Type of disease.	Histology.	Interval between onset and date of report.	Colour of lesions.	Itching.	General remarks. Distribution: glands; scars, etc.
Ann., 1905	Darier	55 years	M.	Macular	Mast-cells found	—	Pink-yellow	None	Constant fresh outbreaks.
Ibid., 1905	,,	16 ,,	F.	,,	,,	3 years	Yellow-pink or violaceous	,,	—
Ibid., 1905	,,	3-6 years	F.	,,	Mast-cells	10 ,,	—	None	Three sisters; only child not affected is one son.
Ibid., 1905	,,	,,	F.	,,	,,	8 ,,	—	,,	
Ibid., 1905	,,	,,	F.	,,	,,	14 ,,	—	,,	
Ibid., 1896	Eudlitz	2½ years	F.	,,	,,	1 year	Red-brown	,,	Face affected.
Ibid., 1893	Quinquaud	45 ,,	M.	,,	Nomast-cells, but pigment	10 years	Yellow-toned	—	Face slightly affected.
Ibid., 1896	Tenneson and Leredde	9 ,,	M.	,,	Mast-cells, but no pigment	1 year	"*Café au lait*"	Moderate	Face, hands, thighs, and feet free; mother had urticaria and thrush during pregnancy.
Arch., vol. I, p. 284	Roux	1 month	F.	,,	—	2½ years	Red	None	No dermographism; neurotic mother; blonde.

Cases observed in other Countries than those named above.

Proc. 4th Congress	Dubois-Havenith (Brussels)	38 years	F.	Macular	No record	2 years	—	Present	Had had factitious urticaria since age of 5 years.
Mon., 1888, p. 938	Mibelli	2 weeks	F.	,,	,,	1 year	Red	—	Icterus neonatorum at birth.
Brit. Journ. Derm., 1900, p. 176	Landskroon	4 mos.	M.	,,	,,	3 years	?	—	—
Ann., 1898, p. 414	Selhorst	?	M.	Nod. and mac.	—	9 ,,	?	Very itchy	Bullæ present.
Mon., 1901, p. 344	Chlebnikow	under 1 year	M.	Macular	—	?	Brown	—	—
Ann., 1905, p. 664	Breda	under 11 mos.	M.	—	Typical	13 months	—	—	Appeared apparently as result of fright.
Ibid.	,,	41 years	M.	Mac. and nod.	No histology	18 ,,	"*Café au lait*"	Itchy	A doubtful case, though recorded as urticaria pigmentosa.
Arch., vol. xl	Jadassohn	3 days	M.	Macular	Mast-cells	?	Reddish	?	Face free.
Ibid., vol. xxix	,,	3 years	M.	,,	,,	17 years	,,	At first itchy, soon absent	Began with urticaria; pigmentation later.

Cases Noted, but Insufficiently Reported, or in which the Reports are inaccessible to me.

Annales, 1898, Case by Rille, in a female.

Monatshefte, 1901, Case by Bruhns, in a female.

Monatshefte, reference lost, Case by Török, in a female aged 3 weeks.

Report of First Congress, 1889, Case alluded to by Petersen, in a woman, then aged 27 years, who had had the disease twenty-two years.

Report of First Congress, 1889, Case alluded to by Veiel, in which the onset was at twenty years.

Report of First Congress, 1889, Case alluded to by Arning, in which the disease was congenital.

Archiv, 1897, Case reported by Lesser, in a female in whom the disease had commenced in infancy and persisted for twenty-nine years.

Berlin Derm. Zeitscrift, 1897, Three cases recorded by Plonski, in which onset was at one year, five years, and one year respectively.

Kaposi's Festschrift, Case reported by Pick, quoted by Crocker (*Text-book, Urticaria Pigmentosa*), occurring after vaccination.

Marseille Méd., 1903, Case reported by Perrin, mentioned in the *Pratique Dermatologique* (Urticaria pigmentosa.)

Courrier Méd. de Paris, 1888, Case by Deligny, quoted by Blumer.

Medycyna, 1888; reference, *Archiv,* xx, p. 828; Case by Majkowski.

British Journal of Dermatology, 1900, Case reported by Morris, in a child aged 3 months.

British Journal of Dermatology, 1894, p. 73, Case alluded to by Mackenzie, onset having occurred in an adult male.

British Journal of Dermatology, 1898, Case quoted by Colcott Fox, as shown by Lustgarten at New York Derm. Soc., 1893.

Bibliography.

It is unnecessary, after the elaborate bibliographies published by Blumer and more recently by Reiss, to undertake the task of compiling a fresh one; moreover, the appendix to a certain extent replaces a bibliography, at any rate in the function of furnishing references. I have, however, thought it might be useful to indicate publications in which coloured and other reproductions of the clinical

and histological appearances of the disease might be found, which I accordingly here append. The list is probably by no means complete.

(I) Pictorial Reproductions of Clinical Aspect of the Disease.

Morrant Baker's Case.—*Clin. Soc. Trans.*, 1874.
Kaposi's *Atlas.*
Monograph on Urticaria Pigmentosa, by Raymond; *Thèse de Paris*, 1888.
Doutrelepont's Case.—*Archiv*, 1890, p. 311.
Morrow's *System of Genito-Urinary Diseases and Dermatology*, p. 755.
Radcliffe-Crocker's *Atlas of Skin-Diseases.*
St. Louis' Hospital Atlas of Skin-Diseases, edited by Pringle.
Galloway-Brongersma Case.—*Brit. Journ. Derm.*, 1899.
La Pratique Dermatologique (same plate as *St. Louis Atlas*).
Hyde and Montgomery's *Text-Book of Dermatology.*
Jacobi's *Atlas of Skin-Diseases*, edited by Pringle.
New Sydenham Society's Atlas, Fasciculus viii (8 plates).

(II) Reproductions of Histological Characters.

Unna's Case.—*Monatshefte* (*Ergänzungsheft*), 1887, p. 64.
Monograph on Urticaria Pigmentosa, by Raymond; *Thèse de Paris*, 1888.
Doutrelepont's Case.—*Archiv*, 1890.
Bäumer's article on "*Urticaria Pigmentosa*," *Archiv*, vol. xxxiv.
Fabry's article on "*Urticaria Pigmentosa*," *Archiv*, vol. xxxiv.
Gilchrist's Case.—*Johns Hopkins Hospital Bulletin*, vol. vii, No. 64.
Reiss's article on "*Urticaria Pigmentosa*," *Monatshefte*, 1903.
Nobl's article on "*Urticaria Pigmentosa*," *Archiv*, vol. lxv, p. 73.

SOCIETY INTELLIGENCE.

THE DERMATOLOGICAL SOCIETY OF LONDON.

A meeting of the above Society was held on Wednesday, December 13th, 1905, Dr. Radcliffe-Crocker in the Chair.

The following cases were exhibited:

Dr. H. G. Adamson showed (1) a case of *unilateral linear nævus.* The patient was a girl, aged 10 years. The eruption was first noticed at the age of three years as a "dark streak" along the anterior border of the left axilla. There is now an irregular band extending from the middle line over the sternum outwards across the chest, passing an inch above the left nipple to the anterior fold of the axilla, along the margin of this fold, and thence for a few inches on the inner

surface of the arm. From the sternal end of the band a narrow vertical line passes down directly in the middle line for a distance of two inches. The nævus is made up of closely-set, soft, raised papillomata of dark-brown colour. Along the anterior axillary border the individual growths are bigger and more prominent; they are nowhere hard and warty.

(2) A case of *prurigo of Hebra* in a boy, aged 6 years, born in East London of German parents, who are also Jewish. The boy is said to have suffered from the eruption "since birth," but the character of the early lesions cannot be ascertained. When first seen, in August last, the eruption occupied the arms and the legs, except the flexures, and to a less extent the trunk. It consisted of small pale papules firm to the touch, scratched papules, and some larger pustulo-papules, pustular probably from secondary infection, thickly placed over these areas. There was no urticarial element in any of the lesions. The glands in the groin were much enlarged. The itching was intense. The condition has improved recently under a treatment adopted by the parents on their own account—viz. by frequent baths followed by rubbing with turpentine. The secondary lesions have gone and the glands are less enlarged, but the primary "prurigo-papules" are the better seen, and also many scars of older scratched lesions.

Dr. J. M. H. MacLeod showed a case of *pigmented nævi* of the scalp in a girl aged 5 years. The nævi were two in number, were roundish in shape, and each was about the size of a shilling. One of them was situated midway between the posterior fontanelle and the occipital protuberance, and the other about an inch to the right of it. The nævi were raised about two millimetres above the surrounding skin, presented a slightly verrucose surface, over which were scattered a number of short hairs, and were purplish brown in colour. At first sight they suggested patches of small-spored ringworms which had been painted with ink. According to the mother, when first noticed, soon after birth, the lesions were raised, of a reddish colour, and hairless, and suggested from her description vascular nævi. The case was of special interest in reference to the possibility of the vascular element in mixed nævi gradually involuting, while the peculiar cellular characteristics persisted and increased to form pigmented moles.

Mr. Percy Sargent (introduced by Dr. Dore) showed a case of *epithelioma associated with psoriasis*. The patient was a woman, aged 31 years, who had suffered from psoriasis since childhood and had become the subject of an epithelioma situated on the outer side of the right thigh. The growth had been present for ten months and had attained the size of a tea-saucer before she was operated upon. The inguinal lymphatic glands were also affected. The growth was excised in February, 1905, and three weeks later the granulating area was Thiersch-grafted from the opposite thigh, from an area which appeared healthy. At the same time the inguinal glands were removed. Healing rapidly ensued. Microscopical examination by Dr. Dudgeon showed the growth to be a squamous-celled carcinoma. It had not involved the deep fascia. The patient is now, ten months after the operation, free from recurrence. Psoriasis has attacked the grafted surface.

Dr. Whitfield showed (1) a case of *psoriasis associated with rodent ulcer*, in a woman, aged 42 years, who had an attack of ordinary psoriasis to which she had been subject for many years, and in addition an ulcer on the left shoulder which had been there for five or six years. The history showed that this had commenced as a pimple which she had scratched, and it did not seem clear whether this had been a simple psoriasis-papule or not. When shown, the ulcer was almost circular and about one and a quarter inches in diameter. It was very shallow, with a pale red and somewhat shiny base, which bled easily. The ulcer lay on a red, elliptical patch, which closely resembled the psoriasis patches elsewhere, but the edge of the ulcer was very slightly thickened, not more so in the exhibitor's opinion than was to be expected in any ulcer lasting for a long time. As the disease resisted treatment, a small portion of one edge was excised and the lesion proved to be a rodent ulcer; it was accordingly being treated by means of X-rays.

(2) A man shown before (see *British Journal of Dermatology*, vol. xiv, p. 179) with nodules on the hands and gangrene of the ears. Dr. Whitfield said he must apologise for showing this old case again, but he had recently had another which was an exact replica of this one, and the patient had promised to come to the meeting but had disappointed him. He would not go into the history

of this case in detail, it had been already published in this journal, but he had some details to add to the case. A piece had been excised and inoculated subcutaneously in a guinea-pig without result, and another piece had been examined histologically, a specimen being then under the microscope. This showed that the salient lesion was a small-celled infiltration around the sweat-coils, combined with what appeared to be a secondary necrotic change in the epithelium over the nodule resembling that seen in the bullous forms of erythema. There was nothing characteristic about the infiltration beyond its situation. The case corresponded with that described under the name of "*hidradenitis*," and he thought this was a good term since it accurately described the lesion without committing one to the theory of causation, as did the term "tuberculide." The opsonic index was low (0·76), and the blood coagulation-time was very long (three minutes). The former might be accounted for by the presence of tubercular adenitis in the neck and axilla, but the latter he thought had much to do with the eruption on the hands.

Dr. Whitfield also gave some details of the patient who had failed to come to the meeting. This was also a man, an engineer by trade, who for five or six years had suffered from sore ears in winter and nodules on the hands. The ears, when seen, showed deep excavations along the free edges of the pinnæ, and also black sloughs where the process was still advancing. The hands were blue and appeared very swollen, though the patient did not think they were so in reality, and stated that he had always had a large, thick hand. The eruption on the hands began in the form of hard, deep nodules, which gradually rose to the surface, the skin over them necrosing, and producing a shallow, indolent ulcer, which eventually healed, leaving a circular depressed scar. There was adenitis in the neck, which might be accounted for by the condition of the ears, but the patient was positive that this commenced in the summer, while the ears were quite sound. The opsonic index was ·92—*i.e.* within normal limits and the coagulation-time of the blood was two minutes and three quarters, more than half as long again as normal. No biopsy was made, as the condition was evidently the same as that of the first patient, and it was annoying for him to have a sore place on his hand.

Dr. Whitfield said he thought these lesions were not in themselves

tubercular, though, of course, they were commoner in patients suffering from tuberculosis than in others, but, then, so were ordinary chilblains, to which these lesions bore a strong resemblance. He was rather inclined to believe that the effect of the cold damaged the walls of the vessels and possibly of the sweat-glands, and the very liquid condition of the blood then allowed a transudation of serum and possibly of sweat direct into the tissues. He knew of no work which afforded evidence as to whether the leakage of sweat into the tissues would cause marked inflammation, but he thought it quite possible that this might be the case, or possibly the sweat might be modified by the action of the cold on the epithelial cells of the coil. There were in neither case any signs or history of paroxysmal syncope or asphyxia such as were seen in Raynaud's disease.

Dr. Sequeira showed (1) two cases of extensive *ringworm* in a boy and young woman (brother and sister). The cases will be published in full in an early issue of the Journal.

(2) A girl, aged 9 years, suffering from *Lupus vulgaris of the tongue, gums, palate, and nose.* The case is being treated by X-rays and is steadily improving.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

A meeting of this Society was held on Wednesday, November 22nd, 1905, Dr. H. Waldo (President) in the Chair.

The following cases were exhibited:

Dr. Alfred Eddowes showed a young man, aged 28 years, with a *sclerosed patch* on the cheek and neck resulting from the excision of a patch *of lupus* of nineteen years' duration. The operation had been performed considerably over six months ago, and now there was not a trace of any original disease.

Dr. Graham Little showed a case of a *follicular eruption,* which he considered to be of the nature of a tuberculide, analogous to, if not identical with, Lichen scrofulosorum. The patient, a girl, aged 10 years, was under the care of Dr. Gossage, by whom she was sent to the exhibitor with the history that she had been ailing for

some time and had developed the eruption about three weeks previously. This was distributed at the time of showing the case very thickly on the abdomen, the back, both upper and lower extremities, and consisted of minute, pale pink, follicular papules, with no apparent grouped arrangement, but in large patches made up of discrete papules. There were no subjective symptoms in connection with the eruption. Dr. Gossage found no evidence of pulmonary tuberculosis, but the child certainly looked thin and delicate. The temperature taken on the day of the visit was 98·8° F. There was no history of family disease. Dr. Little proposed that further investigations into the opsonic index of the patient's blood should be made, if possible, and the result would be reported at a later date.

Dr. H. G. Adamson considered that the eruption certainly bore a great resemblance to that of Lichen scrofulosorum. He was inclined, however, to regard it as of the nature of a Keratosis pilaris, as the condition was comparatively superficial.

Mr. George Pernet showed (1) a case of *multiple tinea circinata* in a boy aged 3 years. The eruption commenced about a month previously on the hands, and then spread to other parts. The neck, sides of the neck, the buttocks, and groins were now involved by a ringed eruption. The rings had coalesced here and there, forming patterns. A few of the patches were somewhat oval, with slightly raised borders, while other, smaller, ones were circular, but not ringed. There was no seborrhoea capitis, and no other children in the family were affected. Up to the present the fungus had not been isolated.

Many members of the Society discussed the case, the resemblance to a seborrhœa corporis being pointed out by some.

(2) A microscopic specimen of *X-rayed hairs*, showing the stake-like, proximal end. They were taken from the border of a patch of ringworm of the scalp which had been treated by one exposure to the rays after the method of Sabouraud-Noiré. The present specimens showed no fungus. Those stumps which still showed fungus, practically down to the end, presented a shorter pointed, more stumpy, extremity than the foregoing. The stake-like end was also observed in hairs from cases of sycosis of the beard treated with X-rays, so that the pointing might be regarded as characteristic.

Dr. V. H. Rutherford exhibited a single woman, aged 36 years, with a *rodent ulcer* of five years' duration, which had been *treated by X-rays*. She was also the subject of chronic psoriasis, of twenty-seven years' standing. The lesions were situated both in front and behind the right ear, that in the latter situation extending over the mastoid process. The disease had never ulcerated, and had always preserved its superficial character, but there was a definite rolled margin to the patches. Microscopically, the characteristic appearances of a rodent ulcer were seen. The patient had received three exposures of the X-rays of fifteen minutes' duration, and already considerable improvement was manifest.

Mr. T. J. Hitchens remarked upon the short history of the disease, and thought that the appearance of the lesions was suggestive, at first sight, of a specific taint.

Dr. Alfred Eddowes recalled just such a superficial case of rodent ulcer in a man, aged 40 years, of twenty-one years' duration, which had spread down to the face and neck, ultimately destroying a part of the jaw and producing an excavation in the centre of the face.

Dr. Edward Stainer showed a *case for diagnosis*. The patient was a lady's maid, who, in travelling over to this country from Brazil, thought that she had been bitten on her arm by some insect. This was six months ago, and now there was an ulcer upon the antero-external aspect of the upper part of the left arm. It was oval in shape, measuring 2 inches in diameter. There was no surrounding infiltration and no enlarged glands in the axilla or supra-clavicular region. The centre of the ulcer was occupied by a small piece of sound skin. The patient said that it began as a small pimple and had gradually spread. There were no other lesions elsewhere, and there was no history of any specific trouble. The exhibitor thought, at first, that it might have been an inflamed tinea, but examinations from the surface failed to detect any fungus. She had only been one day under observation, and she declared positively that she had not been "putting anything on to it."

The case excited much interest, the general opinion being that it was either a case of Dermatitis artefacta or that it was of malignant character. The suggestion of possible tuberculous infection through the bite of some insect was also brought forward.

Dr. J. H. Stowers showed a little girl, aged 9 years, with *Lupus erythematosus*. There were disseminated patches of the disease on

both cheeks, eyebrows, and over the nose. The trouble commenced in November, 1904, over the left eyebrow, the next part to be affected being the right side of the face. The general health was good, and there was no history of phthisis in the family. There was no albuminuria. She was not liable to chilblains, but there was extensive dental caries. The only subjective symptom complained of was a slight itching at times. No other member of the family had suffered from skin-disease.

Dr. Wilfred Warde called attention to the existence of Keratosis pilaris of the scalp, which was present in this case as being a frequently accompanying feature of Lupus erythematosus. He also pointed out the association of adenoids with this disease, and the aspect of the patient certainly seemed to confirm this observation.

CURRENT LITERATURE.

EUCALYPTUS DERMATITIS. Dr. Galewsky. (*Derm. Zeitschr.*, January, 1905, p. 36.)

Dr. Galewsky's first patient consulted him on account of a very irritable urticarial eruption present, mainly on the uncovered parts, but also on the neck and breast. The patient declared that she always improved when she left home, and that the eruption at once reappeared on her return. She also thought that it was more troublesome when she was occupied in one particular room. The only peculiar feature of this room was that it contained some eucalyptus plants, which Dr. Galewsky thought might be responsible for the trouble. The maid-servant ridiculed this suggestion, and to show her contempt for it rubbed her own skin with the leaves of the plant. Half-an-hour later she developed the same dermatitis as her mistress suffered from. This suggests that eucalyptus must be added to the steadily-increasing list of plants that can produce an inflammation of the skin. Both cases took some time to recover.

W. B. W.

ROTATION INSTRUMENTS. Prof. Kromayer. (*Derm. Zeitschr.*, January, 1905, p. 26.)

Prof. Kromayer describes some "punches" and circular knives to be used with the dentists' drill machine for the small operations of dermatology. For the rapid removal of nævi, hairs, etc., they seem worthy of a trial.

W. B. W.

SPONTANEOUS INVOLUTION OF A GIANT NÆVUS. Dr. Ludwig Spitzer. (*Derm. Zeitschr.*, January, 1905, p. 24.)

In 1895 Lassar described a Nævus verrucosus in a girl, aged 12 years, that disappeared completely in the course of five weeks under the administration of Fowler's solution. The author describes a second case in which the involution

was then proceeding. The patient, a male, aged 24 years, had at birth on the inner aspect of the left thigh a deeply-pigmented warty growth, with scattered black hairs. This remained unchanged till the fourth year of life, when it began to disappear from below upwards. The involution had slowly proceeded up to the time when he came under observation. During the four months that the author had the man under his charge it retreated ½ c.m. The black hair disappeared coincidently with the Nævus. W. B. W.

THE OCCURRENCE OF PROTOZOA IN THE LESIONS OF CONGENITAL SYPHILIS IN CHILDREN. Prof. Dr. Max Schüller. (*Derm. Zeitschr.*, January, 1905, p. 1.)

This communication is a continuation of the work already published by Prof. Schüller, in which he endeavours to prove the existence of protozoa in the lesions encountered in all the stages of syphilis. Here cases of congenital syphilis are dealt with, and the parasites are, according to Prof. Schüller, present in all save eight cases of syphilitic pemphigus. Those who are interested in this work can read the description given of the methods employed, and of the results obtained. W. B. W.

GRANULOSIS RUBRA NASI. Henri Malherbe. (*Journ. des Mal. Cut. et Syph.*, February, 1905, vol. xvii, No. 2, p. 97.)

Malherbe records two examples of this affection:

(1) The patient was a delicate boy of fair lymphatic type, aged from 6 to 8 years. For some years the parents had noticed a tendency to reddening at the end of the nose under conditions of emotion after food, or when the child stayed in a warm place. The redness was accompanied by large pearly drops of sweat. When the child first came under observation, in 1898, there were very small flat elevations of a vivid red colour seated upon a rose-coloured base. Large beads of sweat appeared as a result of emotion from examination. There was no feeling of change in the consistency of the skin, and palpation caused no pain. The writer was at a loss to name this singular lesion, which he then met for the first time. Treatment by tonics, cod-liver oil and ichthyol locally produced considerable amelioration at first, but later no improvement. Then, considering the possibility of Lupus erythematosus, quadrillated linear scarification was employed at weekly intervals with successful results. In three months the patient was quite freed from the inconvenient affection.

(2) The second case was that of a little girl, aged 9 years, also very fair and lymphatic. She presented an eruption localised to the end of the nose and identical with that of the boy. This case was seen in 1902, when the affection had been already described under the name of Granulosis rubra nasi, and a definite diagnosis was made at once. The experience gained in the treatment of the previous case induced Malherbe to employ in this new case the method of quadrillate scarification, and here also the result was rapid and good.

Hitherto all local applications have led only to amelioration, without preventing the recurrence of the affection. Scarification is the treatment for choice. Although the trouble disappears at puberty it is an affection which merits interference owing to the disfigurement and consequent raillery to which the child is subjected. H. G. A.



FIG. 13.



FIG. 14.

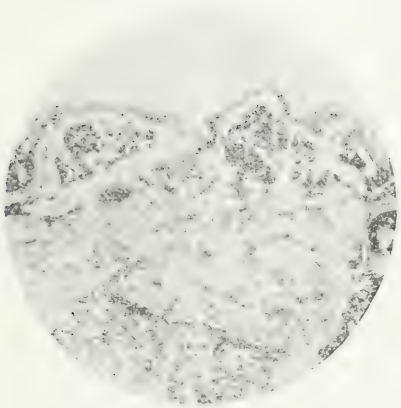


FIG. 15.

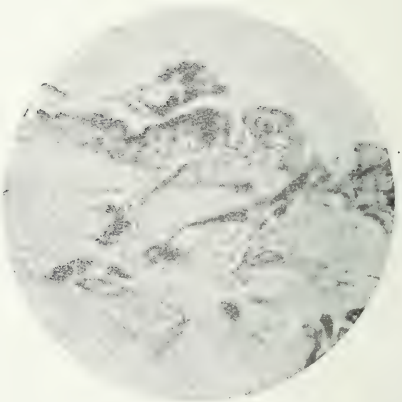


FIG. 16.

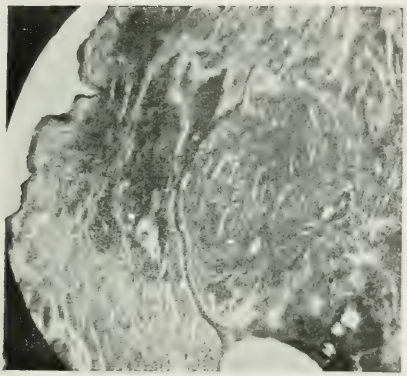


Fig. 17.

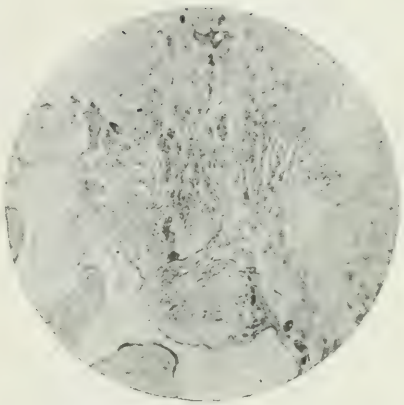


Fig. 18.



Fig. 19.

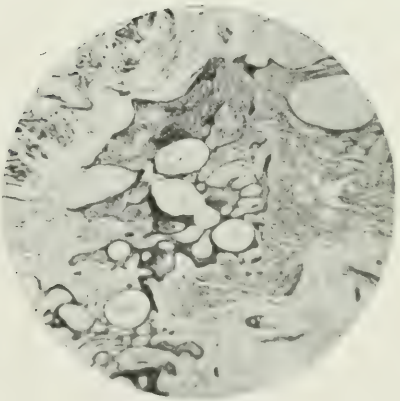


Fig. 20.

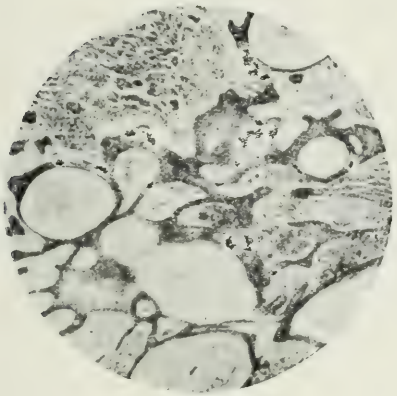


Fig. 21.

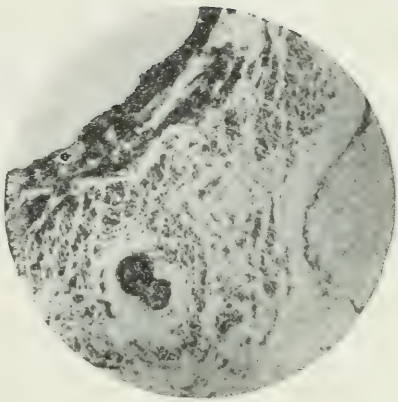


Fig. 22.

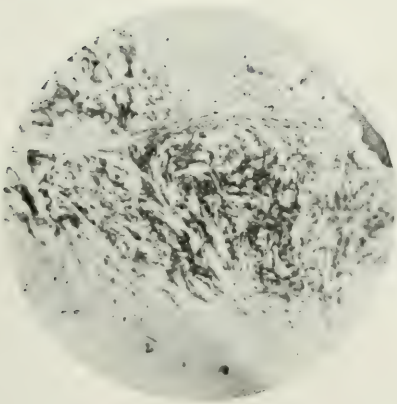


Fig. 23.

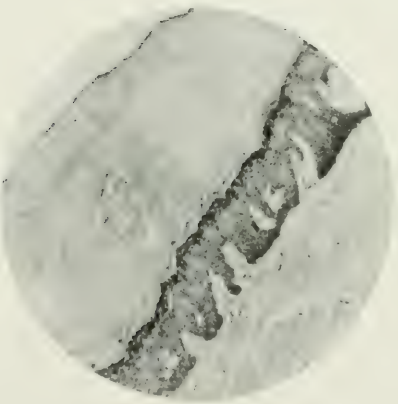


Fig. 24.

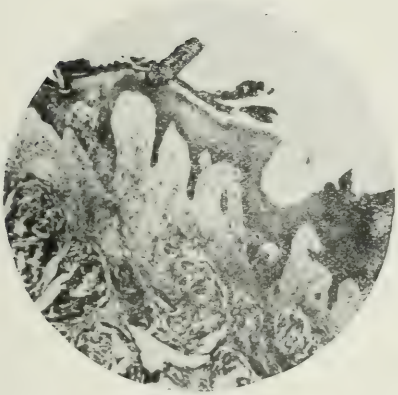


Fig. 25.



Fig. 26.

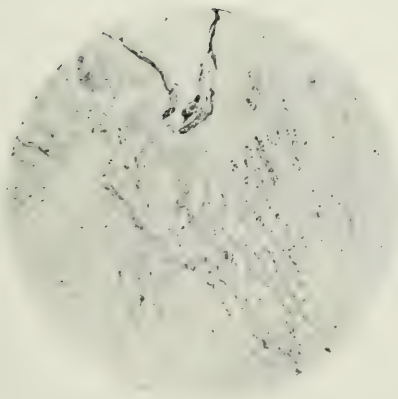


Fig. 27.

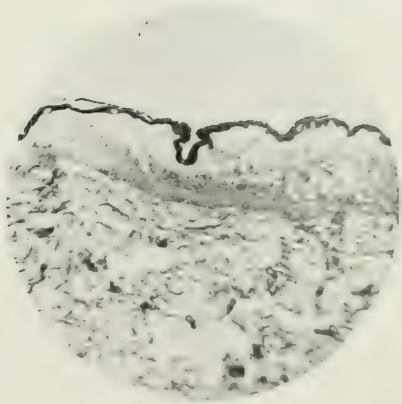


Fig. 28.

THE BRITISH

JOURNAL OF DERMATOLOGY.

FEBRUARY, 1906.

RESEARCHES INTO THE ORIGIN AND STRUCTURE OF MOLES, AND THEIR RELATION TO MALIGNANCY.

By WILFRID S. FOX, M.A., M.D., M.R.C.P.,

Assistant Physician for Diseases of the Skin at the Dreadnought Hospital, Greenwich.

(*Continued from page* 15.)

The Relation which Moles bear to Melanotic Growths.

As we have seen in the previous section, moles, after arriving at maturity, usually remain unchanged till the end of life, except for the slight modification, such as gradual protrusion and superficial cornification, to which we have referred.

They may, however, more rarely undergo some form of degeneration—(*a*) as, for example, may be seen in Specimen VII, which shows fatty degeneration in various places; or (*b*) they may by a process of œdema become molluscifórm, as we have already seen; or (*c*) they may become malignant, producing a tumour which, until recently, has been spoken of as melanotic sarcoma.

This liability of moles to degenerate into malignant growths has been noticed for many years. In 1853 Sir James Paget (57) wrote: "The proneness of melanoid cancer to grow in or beneath moles is very evident, and seems a striking illustration of the weakness in resisting disease which belongs to parts congenitally abnormal." Whether we accept this explanation of the cause of this degeneration

or not, this clinical fact appears, at first sight, strongly to support Cohnheim's view, that malignant growths take their origin in sequestrated fœtal relics, always provided that we accept Unna's view of the epidermal origin of the nævus-cell; but whether this is really the case will be discussed later.

It has been noticed clinically by many observers that these moles which become malignant do so either late in life or after some injury or chronic irritation. By far the great majority of cases are seen in patients over the age of forty, although Mr. Sheild (58) reports one case in a patient under twenty, but here the malignant process followed an injury to the mole by burning. Mr. Eve (59) quotes from Dietrich's series of melanotic growths five cases in which the patients were under ten years of age.

When a mole becomes malignant it does so, as a rule, in one of four ways:

(1) The mole may ulcerate and bleed a little, then perhaps heal slightly, but during the period of ulceration the neighbouring lymphatic glands are noticed to become enlarged with pigmented secondary growths; these increase to a far greater size than the primary growth, and after ulceration of the skin over them discharge an inky fluid, the patient eventually dying from recurrent hæmorrhages, or from ulceration of some large vessel in the neighbourhood.

(2) The mole may increase in size, forming a prominent tumour, and becoming much deeper in colour; then, without any ulceration, the secondary growths appear in the neighbouring lymphatic glands, and almost simultaneously in all parts of the body, the patient dying from cachexia, or from interference of some vital organ by the secondary growths.

(3) More rarely there may be no change in the mole at all, and the first sign which is noticed of malignancy having occurred is the presence of metastases. Mr. Eve (60) quotes three cases of this type, the mole in each case being the only apparent primary source. Unfortunately, no histological examination was made.

(4) The mole may become locally malignant, little secondary black dots may be seen to appear around it, and the whole mass eventually ulcerates, forming the so-called "melanotic rodent ulcer," no secondary growths being seen in the lymphatic glands or elsewhere. Mr. Eve

(61) describes a case of this variety, which started beneath a mole on the angle of the jaw, and was removed twice, but on neither occasion were any infected glands found. Johnston (62) describes a similar case of a melanotic nodule which was excised from the forehead of a young man. On histological examination, the structure was seen to be typical of rodent ulcer in the early stage, with the addition of large polygonal chromatophores completely filled with melanin.

Dr. Whitfield (63) thinks that the cases as regards malignancy may be divided into two classes—(1) the common, highly malignant type, and (2) the slow-growing variety, which shows little tendency to metastases. He further suggests that these two types can be differentiated histologically, since class (1) contained two kinds of cells—(*a*) those resembling their parents in the epidermis, and evidently only recently "snared off"; and (*b*) cells arranged in good alveoli, which have lost nearly all their protoplasm, and look extremely like nævus-cells; and he is, in fact, of the opinion that they are the remains of the old nævus columns, whilst class (2) only shows cells of the (*a*) type, and have no nævus-like cells. In his specimens of this latter kind he says that it would have been impossible to tell by the microscope alone that the growth was secondary to a nævus; the history, however, made this perfectly clear.

Gilchrist (64) gives an example of a rare type, in which there were hundreds of metastases present, but no affection of the lymphatic glands. The only possible explanation of this condition is that the primary growth must have eaten its way into a small vein, and so been distributed by the blood-stream. Gaucher (65), indeed, maintains that this does occasionally occur, although the alternative method of spreading by the lymphatics is by far the commoner.

We have so far spoken of these tumours as "melanotic growths," and it now remains to discuss whether the older writers were correct in calling them "melanotic sarcoma," reserving the use of that term strictly for growths which are of mesoblastic origin, and excluding all others, no matter to what extent the morphological characters of the cells may resemble those of sarcoma-cells.

Mr. Sheild (66) maintains that these tumours are nearly all sarcomatous, and says that out of six consecutive cases he has only had one case which he considered to be a melanotic carcinoma. Unna (67) thinks that "we have sufficient grounds for adopting in the

future a sceptical attitude to the diagnosis of metastatic melanotic sarcoma." He, however, agrees that there is a hæmorrhagic pigmented sarcoma, and divides the pigmented tumours into two classes (68)—(*a*) hæmorrhagic pigmented sarcoma, and (*b*) melanotic pigmented carcinoma. Gilchrist (69) supports Unna, and says that, since the nævus-cells are of epidermal origin, the malignant tumour which arises from these cells must be regarded as a carcinoma and not a sarcoma. This argument then reverts to the old Cohnheim idea, that the cells which have been deposited in the corium for years are the ones which take on malignancy, whereas it appears to me from Specimens XIV and XV that the fresh cell-nests can be clearly seen bursting through the basal layer of the epidermis, and forming the malignant growth in the corium, precisely as we saw these cell-nests forming the nævus column in the young mole. So similar are these two processes, that if one examined the cell-nest alone, one could not say whether it was about to form a mole or a malignant growth. It therefore follows that, instead of the nævo-melanoma being indirectly a carcinoma, as Gilchrist suggests, because it is derived from cells which were years before snared off from the epidermis, it is a direct carcinoma, since it grows immediately from the epidermis.

Perrin (70) argues on the same lines as Gilchrist, and says that the epidermis is nearly normal, and takes no part in the process. Unna (71) thinks that both processes take place simultaneously, because he notices mitosis going on in the old nævus-cells, and also sees (72) the new cell-nests descending from the epidermis and complicating the nævus columns; to the latter, however, he seems to attach the greater importance. Schalek (73) agrees that the so-called melanotic sarcoma of the skin arise from the epidermis. Dr. J. M. H. MacLeod (74) refers to two cases of Whitehead's, in which moles became malignant, and in neither was there any connection detected between the epidermis and the cells of the tumour, although both were undoubtedly malignant tumours developing from nests of nævus-cells. The epidermis seemed rather broken before the invading mass of tumour-cells, which were growing through and projecting beyond it. In places where the epidermis was unbroken it was thin, and there was a distinct line of connective-tissue cells separating the epidermis from the tumour-cells. Whitehead, therefore, from these two cases, favours

the indirect method, and derives the malignant cells from the nævus columns.

Heitzmann (75) takes up a peculiar position, and describes what he calls a combination of melanotic carcinoma in the upper part and melanotic sarcoma in the lower part of two of his five cases; and he refers to the term "sarcoma-carcinomatosis," which Virchow gave to this supposed mixture. While he acknowledges the presence of cell-nests in the upper part, he maintains (76) that the prickle-cells do not pass into cancer-cells directly, but have an intermediate stage of "pigmented medullary tissue"; and later he says that this medullary tissue, which originated in epithelia, can be seen in many places to change directly into sarcomatous tissue. In connection with this it is perfectly true that the epidermal cells as they get deeper alter their shape, and give an effect like that of an alveolar sarcoma; but if it is acknowledged that these cells have come from the epidermis surely no change in shape, however great, can make them sarcomatous—that is to say, of mesoblastic origin.

Johnston (77) is consistent throughout, and says that since the cells of the nævus columns are derived from the endothelium of the lymphatics—that is to say, mesoblastic tissue—the malignant growth which springs from these cells must be a sarcoma, although he acknowledges that there is such a tumour as a true melano-epithelioma, which is very rare, and much less malignant, belonging to the same group as the melanotic rodent ulcer.

Another point to be considered in this matter is the question whether all melanotic growths of the skin take their origin in moles or not. The cases of melanotic growths of the choroid are undoubtedly sarcomatous, and the fact that their course is clinically different from those which are seen in the skin is suggestive that perhaps these latter are not of the same pathological type. In connection with this Mr. Eve (78) points out that in melanotic growths of the eye the lymphatic glands are rarely seen to be enlarged, which might be expected since sarcomata usually spread by the blood-stream. He also adds that secondary growths in the liver are far commoner, that melanuria is more frequently seen than in melanoma of the skin, and that the eye cases are less rapidly fatal. Out of his series of thirty-three cases (79) of melanotic growths of the skin twenty-six originated in moles. Mr. Sheild (80) says that the

majority of melanotic growths in the skin originate in moles, and that the microscope shows the proliferation of the cells of the mole which infiltrate the surrounding tissue; but since he thinks that they are practically all sarcomatous he cannot intend to infer the epidermal origin of the nævus-cells. Unna, as we have seen above, thinks that all melanotic growths in the skin are carcinomatous, and he (81) says that melano-carcinoma always originates in pigmented soft moles.

Rist (82) considers that probably every melanotic sarcoma starts in a nævus, except those in the choroid, and perhaps Kaposi's disease. Johnston (83) says that as regards the tumour in the skin, it is apparent that by no means all melanomata begin as moles, but that when they do it can almost always be clearly demonstrated microscopically. On the other hand, Dr. Whitfield's two cases, mentioned above, are entirely opposed to this assertion.

From this it will be seen that there is a considerable difference of opinion on the subject, but I think that there are several indisputable clinical facts which make it clear that although moles are by far the commonest situations from which melanotic growths arise, yet they can originate in a skin entirely devoid of nævus tissue. In the first place, there is a well-recognised type of melanoma, which is seen at the base of the nails, resembling in the early stages a streak of silver nitrate on the skin, and which has been called "melanotic whitlow." This type of tumour, which, according to Mr. Hutchinson (84), is malignant from the first, and is generally due to injury, appears to be a sarcoma; and I have not been able to find any history of a mole being present in any of the cases previous to the beginning of the tumour. Again, there is no connection with moles in the rather rare but very interesting condition which is known as "lentigo-melanosis," which was also described by Mr. Hutchinson (85), and in which there appears, first of all, a pigmented patch on the face, usually the eyelid, resembling a freckle, which after some years becomes epitheliomatous. These freckle-like spots only appear late in life, and long past the age at which moles develop. There are in addition several cases in which the clinical history is very clear with reference to there having been no mole on the site of the tumour. Dr. Galloway (86) recounts an example of this form of melanoma. In his case it began as a blister with a pigmented border on the sole of the foot; this ruptured and

healed several times. He puts the case in the same category as melanotic whitlow, but at the same time states that he considers it an epithelioma. There was no history of a previous mole, and the microscope showed no nævus-tissue. Dr. Radcliffe-Crocker (87) relates a similar case to the above, which began as a blister on the outer side of the right foot.

It might be suggested that the singular occurrence of finding both moles and melanoma in the eye favours the idea that a mole always precedes a melanotic growth, but I am not aware of any authority who has shown that there is any connection between these two tumours in the eye.

The conclusions, then, which may be drawn are that melanotic growths in the skin originate in moles in the vast majority of cases, but that both melanotic carcinoma and sarcoma may arise entirely apart from moles; and that the cases arising from typical moles which show the columnar formation are invariably carcinomatous, although, as has been suggested under Specimen VIII, there is a rare variety of mole which does not show the typical columns, and which might, since the cells are probably mesoblastic in origin, give rise to a melanotic sarcoma. The detailed histology of melanotic growths, so far as my specimens go, will be seen under Numbers XIV and XV.

With regard to the reason why moles should become malignant, it has been shown above that Cohnheim's suggestion as applied to the nævus-cells in the corium can be ignored, since the fresh cell-nests, which come down from the epidermis, are by far the most important factor, and it is impossible to conceive of Cohnheim's "cell-rests" existing in the epidermis, and growing down late in life, because the epidermis is being constantly shed, and would be therefore the last place in which fœtal relics could continue to lurk. The similarity, noticed above, between the process of forming a mole in infants on the one hand, and that which is seen when the mole becomes malignant, is strongly suggestive that the two are in reality identical, and that every mole in an infant would be a melanotic carcinoma but for the extremely active power which the young corium has to ensnare and cut off the cells, which power is lost after middle age or severe injury, so that when, from some cause unknown, the same process starts again there is no longer sufficient capability remaining to cut off the cell-nests, and, therefore, malignancy begins. The suggestion

that there is some form of struggle going on is borne out by the fact that, as both Perrin (88) and Johnston (89) have noted, some of the metastases, and even the primary tumour, after reaching a certain size may undergo complete involution, leaving only a black stain on the site. Unfortunately, there have not been reported any cases in which all the secondary growths have disappeared, which rather goes to show that the struggle is a local one between tissue and tissue, and not a general reaction.

It has frequently been noticed that moles become malignant after injury, and this was seen more often formerly, when they were irritated by meddlesome surgery, such as the treatment by ligation. Mr. Sheild's case, in which the mole was burnt, is another instance. The same author (90) states that moles on the extremities frequently become malignant, and this is especially so on the foot, where they are liable to be rubbed. Dr. Radcliffe-Crocker (91) also refers to this, and says that "under the middle of the tread of the heel" is the commonest situation.

Johnston reports two cases on the foot out of a series of twelve. Whiteside (92) reports a case of melanoma which originated in a mole on the right foot, and goes so far as to say that any mole on the foot of a person past middle age ought to be excised. I have recently seen two cases of melanoma just below the inner malleolus, and one of them, in Professor Gaucher's clinique at the St. Louis Hospital, Paris, showed the above-mentioned process of partial involution. Gilchrist (93) also quotes the case of a mole situated on the sole of the foot. The frequency with which the malignant process in moles follows injury may be said to suggest two alternative hypotheses—(1) that the corium, being damaged, loses its power of resistance; or (2) that some irritant gains access at the time of the injury, which causes the prickle-cells to resume the formation of cell-nests, as they were wont to do in infancy, with this difference, that corium can now no longer cut off the cells, which grow down. So we see that from this point of view a mole is simply a suitable soil, or, as Paget suggested, "a part congenitally abnormal and therefore weak in resisting disease," and that if the irritant is strong enough we may get the same result in a skin which is free from nævus-tissue as we saw in Dr. Galloway's case on the sole of the foot.

As opposed to this, so to speak, infective hypothesis, it may be

pointed out that Gilchrist (94) removed a secondary nodule from a patient suffering from melanosis one month before death, teased the contents in bouillon, and injected it into the jugular vein of a dog. The dog thrived, and when killed two months later showed no sign of disease.

Whilst carcinoma may be due to the absence of resistance on the part of the corium, yet there must be some external factor to produce the general effects which are seen in the body, beyond the mere collection and development of otherwise physiological cells, whether the infective hypothesis is correct or not. In favour of this it may be mentioned that there are local signs of reaction to an irritant present in the tissue, namely collections of plasma-cells, which are well seen in Specimen XIV in the section stained by Pappenheim's method. Unna (95) has noted these scattered patches, and gives them the title of sub-papillary plasmoma, mentioning that they are mostly seen at the edge of the growth, as might be expected. Now, plasma-cells are seen in these masses in the skin practically only in tuberculosis, syphilis, and the other infective granulomata, so that their presence here is strongly suggestive. Ravogli (96) believes in the parasitic hypothesis, "because when nævi are situated in places where they are protected from injury they do not become malignant but frequently do so if exposed."

As regards the relation which the hard nævi have with malignancy, Gaucher (97) holds that it is principally the hypertrophic variety which becomes epitheliomatous. Most authors agree that the resulting tumour is an epithelioma, since they show the well-recognised concentric pearls of cornified material, which are conspicuous by their absence in the tumours resulting from the soft moles.

Pigment.

Pigment is constantly seen in association with moles, particularly of the soft variety, and Leedham Green (98) considers that it is of such importance that he divides nævi according to the situation in which the pigment is found:

(1) Pigment in the rete only, and none in the corium.
(2) Pigment in the corium only, and none in the rete.
(3) Pigment in both and varying in amount.

Its presence also is so marked in the malignant growths, which

spring from moles, that the question arises whether it is not in both cases something more than a mere concurrent event. I propose, therefore, to discuss the evidence on this point, and also the origin from which the pigment arises.

In the first place, if the young moles in infants are examined, it will be noted that the parts which are most pigmented are those which are showing the most active formation of cell-nests, and in some the pigment is almost entirely confined to those of the prickle-cells, which are forming the nests (compare Specimens I and II). Again, the area in which pigment is distributed in the epidermal cells is seen sometimes to correspond exactly with the area of cellular infiltration in the corium, suggesting that the latter is perhaps dependent on the former for its production (see Specimen V). Also in nævi which are lightly pigmented Rist (99) has pointed out that the proliferation of the cells is limited to those parts which are pigmented. In the moles, which are practically pigmentless, it is true that we still see the process of metaplasia going on; but, as Unna (100) points out, the formation takes place much more slowly, the pegs penetrate deeply into the corium before being snared off, and are angular, toothed, and may contain remnants of prickles. Whereas in the pigmented mole the separation is seen to occur early in the epidermis, the snared-off cells are in balls, and have lost all trace of prickles. He therefore thinks that the presence of pigment makes the loss of prickles more rapid.

If now we turn to the malignant tumours, we see that when a mole becomes malignant, it simultaneously becomes darker in colour. Gaucher (101) states that melanotic sarcoma are always more pigmented than nævi, the latter being brown, while the former are quite black. In many instances we see pigmentation increase in a part before malignancy occurs—for example, in lentigo melanosis, mentioned above, and also in a case described by Mr. Eve (102) in which, after a wound, there occurred a superficial deposit of pigment in the skin, which remained stationary for several years before the melanotic growth started. The cases on the foot, referred to above, which Drs. Radcliffe-Crocker and Galloway have reported, were first seen as pigmented blisters, and became malignant later. All of which seems to suggest that the presence in the skin of an abnormal amount of pigment makes the epidermal cells unstable, so that when the pigment increases malignancy starts.

The notion that melanotic tumours are, as a class, the most malignant of all tumours would assist the argument if it were not based, I think, on a fallacy, since the secondary melanotic growths are easily seen, however small, whereas those of unpigmented tumours often require careful search to reveal their presence. Dr. Galloway (103) says that "pigment appearing abnormally acts as an incentive to the proliferation of the cells of the part affected, whether the cells are epiblastic or mesoblastic in origin." He also notes that the microscope shows that the pigment spreads into the neighbouring tissues much beyond the limit seen by the naked eye. Unna (104) refers to this same zone of imigrating pigment preceding the tumour-cells in the metastases. Gilchrist (105) thinks that when the pigment increases in a mole which has become malignant, the greater part is not derived from the pigment in the corium of the mole. So that we see that the two processes of mole-formation and melanotic growth are similar in this question of pigment, as in others. The order of events in both cases appears to be first pigment, then loss of prickles, although in the mole-formation, as we have seen, this may be congenital, and finally, the formation of cell-nests and down-growth. Whether, however, pigmentation is really the first link in the chain as regards the definite cause is so far pure conjecture; nevertheless, Heitzmann (106) considers pigment an intense chemical irritant, and its presence the cause of the active increase in the tissue.

It will be interesting to see if this view of pigment being the prime cause will fit in with the suggestion made in the last section, that there must be some external irritant. In connection with this we know that pigment does increase in the skin when there is irritation, as is seen, for example, in Pediculosis corporis; and here it may be due (1) to the scratching, although this cannot be the most important factor, because in scabies, where the scratching is equally intense, there is no pigmentation; or (2) to the irritating toxins of the pediculi. The toxin itself is not pigmented, but it causes the production of pigment, and this is mostly seen in the basal layer and in the prickle-cells in the epidermis, as has been shown by Audry (107). Here, then, we have a definite external chemical irritant, which causes the cells of the epidermis to become pigmented. It is possible, therefore, to conceive a similar agent which will produce the increase of pigment in moles, which is, as we have seen, the first stage towards malignancy.

With reference to this, it may be pointed out that Mr. Bland-Sutton (108) figures a fish attacked with external parasites which produce localised melanosis.

Occasionally it will be seen that the secondary growths contain very little pigment, although the primary focus may be quite black, and Mr. Hutchinson (109) offers as an explanation that the power of some persons to form pigment appears to be limited. When, however, the opposite occurs, as indeed sometimes happens, the explanation is not so easy.

The origin of this pigment, to which the name "melanin" has been given, is still very obscure in spite of the fact that much work has been done on the subject. There are, however, three main views on the matter :

(1) That the melanin is derived from the hæmoglobin of the blood and is a further degeneration of hæmosiderin, which breaks up into fine, black granules which contain no iron but a rather large proportion of sulphur. These granules are said to be carried to the epidermis by special cells called "chromatophores," similar to those seen in the chameleon, in spite of the fact that these cells have never been demonstrated in man, and the idea, therefore, probably rests on a false analogy. Others, again, think that the leucocytes act as chromatophores, and break down when they reach the epidermis, whereupon the epidermal cells gradually absorb the scattered granules. In favour of this are Kölliker, Ravogli (110), and Lesser (111), the latter pointing out that the pigment is seen deposited in the adventitia of vessels. Against this view it may be noted that, if proximity to the vessels is an argument in favour of hæmic origin, the discovery of pigment at a distance must be opposed to this view, and in Specimen number IX, pigment is seen high up in the stratum granulosum of the epidermis, with practically none between this and the corium. Perrin (112) also points out that the granules are black from the first, and that the intermediate stages between pigment and melanin are not shown.

(2) Bohn suggests that melanin is derived from the chromatin bodies of the nuclei, from which it is organised by the cell itself.

(3) It has been suggested by Delepine (113) that the epithelial cells manufacture melanin just as the cells of a gland manufacture its secretion, and that melanin is not derived from the hæmoglobin,

although some substance may be brought to the cells which they use in the process. Thus Heitzmann (113) says that pigment is, like fat, a product of living matter; this view seems to me the most probable.

(*To be continued.*)

MUCOUS MEMBRANE LESIONS IN LUPUS ERYTHEMATOSUS.

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In the numerous papers which have been written on the subject of Lupus erythematosus very scanty mention has been made of cases in which the mucous membrane is affected. In fact, it is generally supposed that lesions of the mucous membrane in this disease are rare; but among the large number of patients attending the London Hospital while suffering from this disease one constantly sees cases showing definite mucous membrane changes, and the present communication shows the proportion and the nature of the cases in which such lesions are present.

One of the few accounts of the mucous membrane affections in Lupus erythematosus is in a paper by Dubreuilh, in the *Annales de Dermatologie*: (1) in which he gives a clear and succinct description of the appearance of the buccal mucous membrane. He points out the supposed rarity, and the importance of recognising the lesions, especially as they may occur without any affection of the skin, and would then have to be diagnosed from syphilitic manifestations, mercurial stomatitis, or Lichen planus. After referring to cases reported by Kaposi, Vidal, G. H. Fox, Petrini, Lang, Leslie Roberts, and Balzer, he describes in detail four cases showing typical appearances on the inner surface of the lips, mucous membrane of the cheeks, the gums, tongue, and palatine arch. He describes the patches as commencing in reddish-violet, ill-defined spots, a little infiltrated, and occasionally having small superficial ulcerations. Later, cicatricial streaks run out to a violet border. Finally, the redness tends to become effaced, and the lesion partakes more of the appearance of a white marbled cicatrix, a

little hard to the touch, and having striæ converging to the centre. The patches on the tongue are less characteristic and appear as depapillated spots, red, without infiltration, having no pain, and attacking the edges of the tongue. In one of Dubreuilh's cases he describes the lips as being of a reddish violet colour and desquamating, as if having been painted with collodion. This last character is very descriptive and is illustrated by several cases at the London Hospital.

Radcliffe-Crocker (2) states that Lupus erythomatosus is rare on the mucous membranes, but mentions that he has seen well-marked cases, and quotes cases reported by Galloway and Leslie Roberts, and Dubreuilh's list. He also records a case where the tongue was affected.

Malcolm Morris (3) states that "the mucous membranes of the inner surfaces of the lips, cheeks, soft palate, and larynx may be attacked, usually by extension from the skin."

Anderson (4) says that "in rare cases the disease has extended into the mouth as far as the palate."

I have made a careful examination of fifty-six consecutive cases of Lupus erythematosus, and find that sixteen had some affection of the mucous membrane, giving a percentage of 28, which is certainly greater than the prevalent idea. And one would imagine that the supposed rarity of the affection is due to the fact that very little complaint is made by the patient of the mucous membrane condition, and the physician's attention is not specially drawn to examine the mouth or nose. The majority of the following patients were unaware of the existence of any lesions in the mouth. Some admitted that they had felt a soreness, and attributed this to irritation from decayed teeth or to the wearing of a false plate, but none made any special complaint of discomfort from the lesions. The patients have all attended the London Hospital recently, and the majority are still attending for treatment, so that the mucous membranes have been examined on repeated occasions, and my own observations have been corroborated by Dr. Sequeira in nearly every case. The list comprises cases affecting the inner surfaces of the cheeks, the palate, inner surfaces of the lips, the mucous membrane of the nose, and the conjunctivæ. In no case have we observed the tongue affected.

Forty cases, of which thirty-four were of the discoid or "fixed"

variety of the disease, and six of the disseminated type, showed no mucous membrane changes.

In the following sixteen cases the mucous membrane was affected:

(1) E. C—, female, aged 37 years. Duration 26 years. Discoid type on the nose and cheeks. Small patch on the left buccal mucous membrane.

(2) M. C—, female, aged 30 years. Duration 13 years. Discoid type on the temples, outer canthi, nose, and cheeks. Patch on the right buccal mucous membrane opposite the lower molar teeth.

(3) R. D—, female, aged 36 years. Duration 3 years. Discoid type on the nose and lips. Small patch on the mucous membrane inside the right nostril.

(4) M. C—, female, aged 35 years. Duration 3 years. Discoid type. A triangular patch on the flush area of left cheek and a small patch in front of each ear. Also showed a small patch the size of a pea on the hard palate.

(5) E. H—, female, aged 29 years. Duration 18 months. Discoid type on cheeks and ears. Left buccal mucous membrane affected.

(6) M. H—, female, aged 32 years. Duration 7 years. Discoid type. Very small spot on the nose and lobule of each ear. Mucous membrane of the nose, mouth, and lips affected.

(7) E. S—, female, aged 44 years. Duration 24 years. Discoid type. Symmetrical patches below each ear. Right buccal mucous membrane affected.

(8) E. S—, female, aged 25 years. Duration 4 years. Discoid type on the flush area of each cheek. A small patch on the hard palate.

(9) M. T—, female, aged 35 years. Duration 8 years. Discoid type on the nose and lips (circumoral). Mucous membrane of lips.

(10) E. W—, female, aged 32 years. Duration 7 years. Discoid type on each eyebrow and nose. Patch about the size of a pea on the hard palate, also the conjunctivæ of both lower eyelids.

(11) E. W—, female, aged 34 years. Duration 8 years. Discoid type. Symmetrical patches on cheeks, ears, and nose. One small raised symmetrical patch on each buccal mucous membrane.

(12) R. H—, female, aged 25 years. Duration 15 months. Discoid type. Patch on the left side of the face. Patch on left buccal mucous membrane opposite the molar teeth, and a smaller patch on the right side.

(13) E. F—, female, aged 30 years. Duration 7 years. Disseminated case. Very bad all over the body. Patches on the hard palate and buccal mucous membranes.

(14) P. G—, female, aged 35 years. Duration 7 years. Disseminated type, face, scalp, ears, and arms. Two small patches on the buccal mucous membrane and one on the palate.

(15) L. W—, female, aged 33 years. Duration 20 years. Disseminated type face, ears, etc. Symmetrical oval patches on buccal mucous membranes opposite the last molar teeth.

(16) C. P—, female, aged 38 years. Duration 18 years. Disseminated type all over the body. A severe case, which recovered, but for four years has had recurrence on the face. Slight affection of mucous membrane of the nose. Mucous membrane of the lips looks dry and scaly, as if painted with collodion.

The characters of the lesions observed were as follows: In recent patches there is a small hyperæmic area, sometimes level with the adjacent mucous membranes and sometimes apparently swollen. Later it appears as an irregularly-shaped patch with a central bluish-grey or whitish depressed scar, surrounded by an erythematous and slightly swollen edge. In cases in which the patches are older, or non-active, the appearance is that of greyish-white irregular scars, sharply defined from the healthy mucous membrane by a white or bluish-white border. The lips often presented the appearance, as described by Dubreuilh, of having been painted with collodion which was desquamating. As in the skin, the disease is limited to the superficial layers, and the patches are isolated and often symmetrical. In nearly all the above cases the lesions were discrete, and were not continuous with lesions on the skin. Sections for microscopical examination were not obtained.

With regard to the site of the lesions, the most common situation was on the mucous membrane of the cheeks opposite the crowns of the upper and lower molar teeth. Ten of the cases were affected in this position. Five patients showed patches on the hard palate, three on the lips, three on the mucous membrane of the septum nasi, and one on the conjunctivæ of the lower eyelids.

The results of the examination show that four cases out of ten of the disseminated type and twelve out of forty-six of the discoid type had mucous membrane affections. One of the most severe cases of the disseminated type, however, had no lesions of the mucous membranes. On the other hand, Case No. 6, reported above, had very little skin affection, while the mucuous membranes of the nose, mouth, and lips were all affected. All the cases affected were females, but the total list of fifty-six patients presented only five males, which is even less than the proportion of males to females given in Sequeira and Balean's paper (5). Neither age nor duration of the disease seems to be a determining factor. The urine was examined for albumen in a number of cases, but the result bore no relation to the presence of mucous membrane lesions.

Conclusions.

(1) Lesions of the mucous membrane in *Lupus erythematosus* are

more common than is generally supposed, the above collection of cases giving a percentage of twenty-eight.

(2) The lesions are proportionally more frequently met with in cases of the disseminated type.

(3) The affection is most commonly seen on the mucous membrane on the inner surface of the cheeks.

(4) The presence of the lesions is an important aid in diagnosis. Case No. 12, reported above, presented some difficulties in diagnosis until the buccal mucous membrane was examined.

(5) The lesions do not materially affect the course of symptoms of the disease, and do not appear to call for any special local treatment.

I desire to acknowledge my indebtedness to Dr. Sequeira for his valuable assistance and advice, and for allowing me to use these cases for the purposes of this inquiry.

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A NOTE ON CERTAIN APPEARANCES OF X-RAYED HAIRS.

By A. WINKELRIED WILLIAMS, M.B., C.M., D.P.H.

The peculiar tailing out of hairs depilated by exposure to X-rays is well known. I have recently observed in some of my patients variations of this phenomenon which are of interest.

Fig. 1 illustrates a type of hair depilated by several short exposures (two of ten minutes each at five inches from anode, and two of ten minutes each at four inches from anode, the exposures on successive days; a moderately hard tube was used). The exposures caused very complete alopecia. The tailing out of the hairs is most marked in this type. Not much pigment is found in the attenuated part, in which there is no visible medulla. There is no cupping of the fine end, which is often quite pointed, so it is hard to decide whether they are papillary hairs.

Fig. 2 illustrates the common type seen in hairs depilated by a single long exposure (timed by Sabouraud and Noiré's platino-cyanide meter). Complete alopecia resulted. This type has far less tailing of the hair; in fact, in profile the hair ends look wedge-shaped.

Fig. 3 illustrates a type in which depilation was not complete. It is the figure of a hair taken from another area of the scalp of the same

Fig. 1. Fig. 2.





patient as the hair in Fig. 1 (in this case there were three exposures of ten minutes each). Most of the hairs fell spontaneously, but a number remained and were pulled out with comparatively slight traction. A few at the border of the patch were not removed. This proved an interesting experiment. As these hairs grew the attenuated pale portion appeared on the surface, and as the growth continued the hairs gradually became stronger, until the natural thickness and colour were recovered. The attenuated portion and root of

Fig. 3.



such a hair is shown on the figure (Fig. 3). The hair appears drawn out like a piece of glass tubing in the making of a capillary pipette. The root is evidently that of a papillary hair.

These examples illustrate well the action of X-rays on the vegetative function of the hair-root and papilla. There is a weakening of the power to produce cornified cells. The short tail of the hair

depicted in Fig. 2 indicates the rapid paralysis of this function by a single long exposure. The long tailing and pointed ends of the hairs shown in Fig. 1, produced by a series of short exposures leading to complete alopecia, demonstrate a progressive weakening, culminating at last in complete paralysis. The third example (Fig. 3) shows how the fewer exposures stopped short of causing complete paralysis and gradual recovery followed.

The resemblance of Fig. 3 to the narrow portion of a moniliform hair is very striking. This fact, together with the occasional appearance of moniliform hairs in alopecia areata, would rather suggest that an intermittent interference with the trophic function of the papilla may be a cause of moniliform hairs, and that the keratosis of the mouth of the follicle described by F. Bering (which is not always present), if it is the primary condition, may act indirectly on the papilla, and not by mere pressure on the hairs as he suggests.

SOCIETY INTELLIGENCE.

THE DERMATOLOGICAL SOCIETY OF LONDON.

A MEETING of the above Society was held at No. 11, Chandos Street, Cavendish Square, on Wednesday, January 10th, 1906, Dr. JAMES GALLOWAY in the Chair.

The following cases were exhibited:

Dr. S. E. DORE showed a young woman who presented *lesions on the dorsal surfaces of the feet and ankles* suggesting those of angiokeratoma in an early stage. The lesions had existed for four months, and consisted of numerous scattered, discrete, telangiectatic, or hæmorrhagic puncta, arranged either singly or in small groups. The absence of the keratoma element and of lesions on the toes, and the presence of small scars and of several lichenified eczematoid patches were against the diagnosis of angiokeratoma. The condition had been preceded for about a year by coldness of the extremities, but there was no history of actual chilblains.

Dr. PRINGLE, whose clinic the patient was attending, considered the case to be one of angiokeratoma, or of a condition closely allied to it, the keratoma element not having developed, as in several recorded cases.

Dr. Colcott-Fox and Dr. Whitfield thought the case probably came under this heading.

Dr. Galloway regarded it as the result of a chronic inflammatory infective process.

Dr. James Galloway presented the case of a man, aged 45 years, a tailor by occupation. Some twenty years previously he had contracted syphilis, and had been under the care of Dr. Pringle ten years ago, who recognised the patient and verified his statement.

On coming to Dr. Galloway at Charing Cross Hospital, two months ago, he showed his right hand, which on the palmar surface presented a circinate squamous lesion resembling closely the squamous palmar syphilide, and requested Dr. Galloway to place him under treatment for syphilis in order to get rid of this eruption. In addition, on the back of the forefinger was observed a semicircle of pale-pink firm nodules, occupying the radial border of the back of the first phalanx. One or two scattered lesions of the same type were observed elsewhere on the back of the forefinger. The right hand, in addition, bore the marks of hard toil, and it was found that he was accustomed to use heavy irons to press clothing. The right hand and forearm in consequence were larger and more muscular than the left; the left hand was soft, the right hand horny.

In view of the history of the patient and the occurrence of the palmar lesions, he was placed on a course of anti-syphilitic treatment, consisting both of mercury and iodide of potassium, while over night the hands were carefully dressed with a glycerinated application of the oxide of zinc ointment with salicylic acid.

After a short time the palmar eruption began to disappear, though some discomfort was complained of by the patient on account of the tenderness produced during his work. He was unable to give up his occupation during treatment.

In the meantime the eruption on the dorsal surface of the forefinger increased. A similar patch of pink nodules arranged in a circular area appeared on the back of the hand. At his period the eruption on the back of the hand, which was clearly not syphilitic in character, very closely resembled the type of disease described by Dr. Galloway as Lichen annularis. The close resemblance was also commented upon at this time by Dr. MacLeod. For a period of about two months this lichen-like eruption continued to be only slowly pro-

gressive, while the eruption on the palm gradually disappeared. During the ten days previous to this meeting of the Society a new development had taken place. While the palmar eruption had almost vanished, the dorsal eruption had increased rapidly, and Dr. Galloway demonstrated at the meeting a profuse eruption of undoubted Lichen planus on the right forearm, affecting mainly the flexor but also the dorsal surface, and showing itself in a very characteristic fashion along the line of a scratch on the forearm. The eruption on the back of the hand and forefinger remained of the more chronic type, but shared in the general increase in severity of the attack.

Dr. Galloway desired to draw attention to this case :

First, on account of the difficulty in diagnosis produced by the occurrence of a chronic syphilide with Lichen planus. There could be no doubt that the palmar eruption was a squamous syphilide both on account of its clinical characters and on account of its satisfactory disappearance under appropriate treatment. The early and chronic lesions of Lichen planus on the back of the hand, though from the first differing from a papular syphilide, might readily have been mistaken for a syphilitic lesion, owing to the history and other circumstances of the case.

Second, as an indication of the various conditions of blood-poisoning which might be found to underlie the eruptions of the lichen class. The resemblance between the form of Lichen planus present in the early period of this attack and the Lichen annularis or Granuloma annulare mentioned by Dr. Crocker and himself was suggestive of an underlying relationship in causation. It was agreed that many forms of blood-poisoning might be effective in producing lesions of the group Erythema exudativum. These might be definitely intestinal in origin in some cases, while others appeared to be related to alterations in the functions of other viscera, such as the kidneys and the liver, and possibly to disturbances in general metabolism apart from disease of definite organs. It also seemed to be true that the lesions of the Erythema exudativum type might in some cases become destructive, and apart from accidental ulceration actually leave atrophy of the skin. Dr. Galloway suggested for consideration that the form of disease of the skin typified by the classical Lichen planus, of which many aberrant forms are already recognised and to which the unusual conditions Lichen annularis or granuloma annulare may also be related,

were all manifestations in the skin of toxæmic states of diverse origin, and that in the case before the Society the remoter effects of syphilitic disease might even be thought of as conducing to eruptions of this type.

Dr. Galloway also drew attention to the remarkable way in which the eruption had confined itself to the right hand and arm, the part of the body, in this patient's case, subjected to much hard usage and to possibility of injury.

Dr. Graham Little showed a case of *Fordyce's disease of the buccal mucosa*, in a woman, aged 34 years, who was also the subject of hypertrophic Lichen planus. The latter disease had been present for about seven months in the shape of two patches the size of a sixpence on the inner side of the right leg near the knee. These patches were itchy, and had persisted unchanged for the period mentioned. The appearances in the mouth were like those described by Fordyce and depicted by Stelwagon in his excellent text-book. The lesions were on the mucous membrane of the inside of each cheek, and looked like irregular, small, buff-coloured deposits in the substance of the mucous membrane, of the size of a small pin's head for the most part, some larger, some smaller; they gave rise to no symptoms whatever, so that it was difficult to say when they had commenced. They had been observed only when the mouth had been examined to ascertain whether there were any lesions of the mucous membrane such as were seen in Lichen planus. The co-existence of the two diseases was certainly peculiar, but it was felt by the exhibitor that the appearances on the mucous membrane were not like those in Lichen planus, although this cause had been suggested by some observers of repute who had seen the case.

Dr. Radcliffe-Crocker agreed that the mouth-lesions were not those of Lichen planus, but was not certain that they were of the same character as the condition described by Fordyce, in which the changes had principally affected the mucous membrane of the lips, which in this case were intact.

Sir Cooper Perry was quite satisfied that this was the condition described by Fordyce.

Dr. Whitfield contended that the mouth-lesions in this case were not pathological, and would be seen, if looked for, in many normal persons.

Mr. Malcolm Morris showed a case of *lymphangioma circumscriptum cutis* in a man, aged 35 years, in whom the disease had begun at the

age of seventeen. Over the external surface of the buttock and right thigh there was a large patch of skin showing papular elevations and deep-seated vesicles, and there were several isolated groups of vesicles on the anterior surface of the thigh. An interesting feature of the case was that the patient had been subject to recurring attacks of lymphangitis accompanying or following general febrile symptoms, during which the vesicle formation became much more apparent for a time, and was followed by quiescence or almost complete disappearance of the condition. The patient had also had a patch of hypertrophied Lichen planus, which had been entirely removed by X-ray treatment.

Dr. Radcliffe-Crocker showed a gentleman, aged 59 years, from Australia. He came of a long-lived family, and he himself was a tall, very robust, healthy man, looking ten years younger than his age; he had never lost a tooth, and his hair was still dark. His previous health had always been good, except that five years ago he had passed a pea-sized uric acid calculus, and three years before that had been thrown off a tram and been much shaken up. He presented no symptoms of gout now. The present eruption began four years ago, and was diagnosed as a general outbreak of dry eczema. In spite of much treatment, including a course of the sulphur waters of New Zealand, he was very little better, but eventually it very nearly cleared up. He has had three similar attacks since, but less severe than the first. In January, 1904, after a trip to Fremantle, the eruption disappeared all but a spot on the chest and back. To this a weak tar preparation was applied, which set up another attack.

The present attack began last September, when he got a chill and was in bed for a month. He recovered, but on November 10th he went on board ship, and at the Cape had a relapse, beginning at the arms, which discharged, and which from his description suggested a discharging eczema on the face and arms. When seen by the exhibitor on January 6th, 1906, almost all the trunk was of a deep scarlet hue, and smooth to the touch, but close examination showed minute Lichen-planus-like papules, which were separated towards the upper part of the chest by a varying amount of normal skin. There was very little thickening of the skin anywhere and in many parts none. The neck and face at first appeared clear, but close

examination showed a slight, fine, punctiform redness about the cheeks and line of the jaw.

On the upper limbs there was much less redness, and that was still more obscured by a moderate degree of desquamation on the upper arm, and the forearms were smooth and paler than the arms. The thighs were like the trunk but less affected, while the legs were in an intermediate condition, with slight roughness and a purplish redness. The whole eruption was quite dry, but he was subject to profuse sweatings, which in Sydney were cold but in England were warm. At times he had a feeling of great heat, but his statements varied about itching except on the scalp, where it was very decided sometimes, and the skin of the head was slightly reddened, but there was no loss of hair. There was no enlargement of lymphatic glands. The digestive organs were in good order. The urine contained neither albumen nor sugar.

The majority of the members agreed with the exhibitor that it was probably a case of Parakeratosis, or Lichen variegatus, but with some unusual features, while two or three inclined to its being the "homme rouge" stage of Mycosis fungoides. No one, however, expressed a very decided opinion, as there were difficult features to reconcile with either diagnosis.

At the meeting of December 13th a case exhibited by Dr. Radcliffe-Crocker was not recorded, the following notes arriving too late for inclusion in the transactions of that meeting.

Dr. Radcliffe-Crocker showed a private patient with *lepra*, contracted in Brazil, in which the patient, a man aged 46 years, had resided as a missionary for sixteen years. He was an American by birth and of strong physique. The lesions present were a well-defined erythematous patch on the left side of the nose and adjoining cheek, with marked infiltration and bright red colour, and on the forehead a paler red infiltration.

Scattered over the trunk and limbs were irregular groups or patches made up of miliary papules of brownish-red colour. There was a ringed erythema on the ball of each thumb, and partial anæsthesia on the inner and anterior half of the foot. Except for some dyspepsia he was in good health. He has had two bad attacks of malaria. He was being treated by intra-muscular injections of sozoiodolate of mercury once a week.

CURRENT LITERATURE.

CONTRIBUTION TO THE STUDY OF BUCCAL LEUCOPLAKIAS AND THEIR TREATMENT. G. Filarétopoulo. (*Journ. des Mal. Cut. et Syph.*, February, 1905, Tome xvii, No. 2, p. 81.)

Leucoplakia is not a definite morbid entity; it may be due to a great many causes, and it may appear in many different forms. In the present paper the writer describes briefly the principal clinical characters of the various types, their diagnosis from one another and from other conditions, and their appropriate treatment.

Of the causes of Leucoplakia buccalis *syphilis* is by far the most frequent. It occurs in old syphilitics in whom the disease has been improperly treated during its early stages. Tobacco is almost always the exciting cause in these cases, Next in frequency to syphilis comes the "*herpetic constitution*," aided by *chronic dyspepsia*. In these conditions the tongue is red, congested, deeply fissured, and with small painful ulcers at its borders; later whitish striæ develop, and finally a condition altogether characteristic of lingual leucoplakia. True leucoplakia is also often met with in *psoriasis*, *Lichen planus*, *herpes*, and *eczema*; one finds smooth, whitish indurated plaques of leucoplakia, which are to be distinguished from eczema, psoriasis, or Lichen planus in the same situation. In all these forms *tobacco* is the great exciting cause, but it may be aided, or sometimes replaced, by other irritant agents—alcohol, spices, dental asperities. The important rôle played by tobacco explains the occurrence of leucoplakia almost exclusively in males. Tobacco may even be the sole cause of leucoplakia, but the patches are then confined to the inner sides of the cheeks and the commissures of the lips.

The clinical aspect varies indefinitely, but the pathological process is the same, viz. the transformation of the epithelial mucosa into epidermis—that is, into a keratinised tissue, with ultimately a sclerous thickening of the derma, from whence arises one of its fundamental symptoms, viz. its hard consistence.

On account of the absence of pain the *début* is often unnoticed. It begins always as red macules, which soon becomes whitish plaques. These, under the continued influence of irritant action, soon become thickened and fissured. They lose their smoothness and become rugose, eroded, ulcerated, or papillomatous. In size they may be small and separated by little grooves, which give the tongue the appearance of a close-woven net, or they may be large and flat and arranged like a mosaic. Generally the tongue is only partially attacked, with healthy portions between, but sometimes the whole surface is affected. The borders of the tongue become eroded and fissured by the pressure of the teeth. The labial commisures, the lips, the gums, and the soft palate are also attacked in this order of frequency.

The clinical relationships of epithelioma to Leucoplakia lingualis are briefly discussed. Epithelioma most usually develops from leucoplakia of syphilitic origin; it may even develop in syphilitics without the intervention of leucoplakia and probably from a lowering of the resistance of the tissues. In estimating the frequency of epithelioma as a sequence of syphilitic leucoplakia, one must exclude cases of *syphilitic superficial glossitis*, which is altogether a different process from leucoplakia, and which is relatively benign and very rarely leads to

epithelioma. The true indurated leucoplakia patches which are most likely to result in epithelioma are the fissured and ulcerated, and those which present papillary hypertrophy. There are several affections of the buccal mucous membranes which must not be confounded with leucoplakia, viz. annular eruption or ringed desquamation; ordinary eczema of the tongue, characterised by redness and itching; the scars of syphilitic gummata; the ordinary buccal eruptions of Lichen planus, which are distinguished by their suppleness, moisture, and itching; lingual psoriasis, occurring especially in psoriatic smokers; tuberculous glossitis.

Treatment.—The rebelliousness of leucoplakia to treatment is well known. The writer advocates anti-syphilitic treatment in all cases, whether of syphilitic origin or not. He has had good results in early cases with energetic mixed treatment (mercury by insoluble injections, and potassium iodide in large doses *per rectum*). In old cases surgical interference is indicated, especially for hard, rugose, thickened plaques, little influenced by treatment or with papillomatous hypertrophy. The thermo-cautery or the galvano-cautery is recommended, burning of course widely beyond the diseased area. In lichenoid leucoplakia arsenic gives wonderful results. Locally, tobacco, spirits and wines must be strictly forbidden. The mouth and teeth are to be carefully cleaned after each meal, and alkaline mouth washes used frequently. Astringent washes are to be avoided. Emollient gargles and ointments may be useful. For deep fissures acid nitrate of mercury or chromic acid 10 per cent., immediately followed by mitigated nitrate of silver, two or three times a week.

H. G. A.

RESEARCHES ON ALOPECIA WITH ATROPHY, VARIETY "PSEUDO-PELADE." Brocq, Lenglet, and Ayrignac. (*Ann. de Derm. et. de Syph.*, January, 1905, p. 1; February, 1905, p. 97; March, 1905, p. 209.)

This is an elaborate and very lengthy paper in three instalments, undertaking the classification and distinction of all the varieties of alopecia accompanied by atrophy. An historical disquisition is given of the earlier attempts of the French school to elucidate this question, chiefly by Lailler, Quinquaud, and Brocq, and a very complete analysis is offered of the literature under the headings of observations of—(1) French, (2) American, (3) English, (4) German, and (5) Swiss authors.

The characters, as Brocq conceives them, of the type of disease he has named "pseudo-pelade" are detailed as follows:

(1) The onset is insidious, unattended by pain; multiple hairs are affected, their number increasing as the affection develops.

(2) Patches of alopecia, usually of small extent and with very various shapes, are found, the surface of these being of ivory whiteness and smoothness, like scar-tissue.

(3) Occasionally there is a faint pink tint round the hairs attacked and a little swelling, occasionally fine desquamation, but never a deep redness or perifollicular suppuration.

(4) If the diseased hair is pulled it comes out very easily, and its root has a more or less thick sheath which is transparent, and like a favus-hair. When the hair is thus pulled out or falls out, the papules become completely atrophied. The hair surrounding the patch is quite healthy.

(5) The commonest position on the scalp for the disease to appear is on the outer and the occipital region; after that the temples; but any part of the head may be affected.

(6) The progress of the disease is extremely slow.

(7) The disease appears to attack men much more frequently than women.

(8) No results have been obtained so far in attempts to find a micro-organism in the diseased hairs.

With these criteria as a standard, Brocq finds that 29 cases have been recorded of this disease, of which 11 are French, 3 American, 7 English, 4 German, 3 Italian, and 1 Swiss. In 20 cases the subjects were male, in 9 female. To this number of recorded cases Brocq now adds 22 personal observations, now published for the first time, which are described with minute particularity. In the third part of his paper, but in its second instalment, he undertakes a "didactic description" of the disease, which is in the main an amplification of the points given above as characteristic features of the diagnosis. In the third instalment, the histological description, for which Lenglet is responsible, of the disease is given, founded on the examination of three cases. They all showed in the affected parts enormous dilatation of the capillaries, which were filled with red corpuscles and here and there leucocytes; the displacement of the connective tissue round the vessels, the disappearance or fibrous transformation of the collagen of the whole perivascular zone affected by the infiltration and œdema, the presence of round cells, having the character of lymphocytes, resting on the network of fibrous tissue round the vessels, the entire disappearance of the elastic tissue and the collagen in all the perivascular spaces, and finally, the dilatation of a great number of lymphatic spaces. The round cells were found chiefly about the subpapillary plexus and the peripilar vessels; they were massed principally about the upper part of the hair-shaft, extending to the papillæ in attenuated columns. This encroachment of cells on the hair explains for Lenglet the fall of the hair. The presence of the infiltrate of cells is betrayed, even in cases where it has been again absorbed, by the changes in the elastic tissue, in which the lacunæ mark the position of the infiltration. Moreover, the place of the fallen hair is also marked by the spaces in the elastic network, which form a columnar lacuna, perpendicular to the surface of the epidermis, in which vestiges of the hair-annexes may sometimes be found (*e. g.* arrector muscle). The walls of the vessels appear but little altered. The cells constituting the infiltration are chiefly lymphocytes, but plasma-cells, mast-cells, eosinophiles, are also found. A constant feature was the number of pigment-cells in the papillary zone and in the corium.

The epidermis is naturally not much altered, since the main change is subepidermal; but there may be complete atrophy and destruction of the epidermal annexes, with thinning of the epidermis and flattening of the outer papillary processes. No constant results have been found from bacteriological investigations.

The pathogeny of the disease is discussed at length, and Lupus erythematosus and Keratosis pilaris are declared to be its nearest analogies. It is a disease of adult life, only one case having been observed in a child; the proportion of males to females attacked is about four to one; tuberculosis has been a somewhat frequent association, syphilis much less commonly. It cannot in any sense be considered a parasyphilitic affection. Ayrignac examined the urine in four cases, and found a considerable diminution of nitrogenous excretion, and sums up his

findings with the statement that in all four cases the urinary *dépuration* was inadequate.

The treatment recommended by Brocq consists in the application of mercurial or sulphurous lotions, for which he gives several useful formulæ. The paper is illustrated by several excellent plates.

E. G. L.

"SCROTAL TONGUE" IN A FAMILY SERIES. Payenneville. (*Ann. de Derm. et de Syph.*, February, 1905, p. 141.)

This author has recently written a thesis on the subject of "Langue Scrotale"; this observation was recorded during the collection of facts for that work. "Scrotal tongue" is the somewhat unhappy name which has been given to a fissured chronic glossitis, which is usually congenital. In the case here described the patient, a woman, aged 54 years, had eleven children, of whom three had this condition of the tongue. The patient herself had had the malformation of the tongue as long as she could remember—probably from birth—and stated that her mother had the same appearance of the tongue. Payenneville saw two of th daughters of the patient, twin sisters, who each had an exactly similar condition of the tongue, which is figured in the text. The parents and all the members of this family are stated to have shown symptoms, in addition, of "arthritism." The author does not insist upon any causal connection between the two conditions. The paper is illustrated by three photographs.

E. G. L.

RHINOSCLEROMA. Max Toplitz and Henry Kreuder. (*Amer. Journ. of the Med. Sciences*, July, 1905, p. 81.)

Two cases of this disease are recorded in New York by the authors, and mention is made of several others. The majority of the cases, including the two specially described, were imported cases, arriving from the endemic area in Western Poland, Galicia, and the neighbouring portions of the Russian and Austro-Hungarian territories. In the account given of the incidence of the disease a certain number of cases appear to have been reported from Central America. Fortunately, in the States and in Canada the disease seems to be as infrequent as in this country.

The paper includes both a clinical description of the cases and an account of the histological appearances. The close resemblance between the bacillus present in the tissues and the bacillus of Friedländer is emphasized, but a definite statement as the value of the specific differences is not made. J. G.

REPORT OF A CASE OF AN EXTENSIVE BURN OF THE THIRD DEGREE. Archibald N. Fauntleroy. (*Amer. Journ. of the Med. Sciences*, June, 1905, p. 985.)

The author, who is a surgeon in the United States Navy, gives an account of a case of severe burns, in which, with the ingenuity characteristic of the man-of-war's-man, arrangements were made with much success for continuous treatment by means of irrigation and baths. The writer has had previous experience of extensive burns, resulting from explosions on the U.S.S. *Massachusetts* and

Missouri, and comes to the conclusion that all extensive burns should be treated by the continuous warm bath on account of the rest given to the patient and the ease with which the burnt area may be handled without inflicting pain and increasing shock. When the sloughs have begun to separate, active, continuous, antiseptic irrigation, preferably by means of aluminium acetate, is indicated. The ingenuity of both physicians and attendants will be taxed to fulfil these indications, and those interested may be safely referred to the author's paper for an account of his apparatus. Accumulation of gas in the intestines, which almost invariably occurs when the abdomen is involved, requires special attention in order to give relief to the patient and prevent interference with the heart's action and respiration. The shock which is always present in extensive burns should be carefully treated, and in the author's experience the intravenous infusion of normal salt solution is likely to give good results. In addition to the medical information afforded, the case is of special interest as giving evidence of how the American-Indian race is degenerating and disappearing.

The case described "is that of Moses Seattle, an Indian dwarf, the last of the tribe of Seattle, and the grandson of the famous Indian chief Seattle from whom the present city of Seattle is named. He was 34 years old, a trifle over 4 feet high, and had a local reputation for consuming large quantities of 'fire-water,' whenever it was within his reach. The history of the accident is rather obscure, but from the statement made by the patient before death, it is believed that he, in company with a few others, was drinking in a small hut, not far from the Indian reservation at Fort Madison, Washington, when he became very much under the influence of the liquor, and fell asleep. While he was in this condition the small house caught fire, presumably from the fire on the hearth, and the only thing the patient remembered was suddenly finding himself struggling through the flames in his effort to escape. J. G.

ERYTHEMA AND URTICARIA, WITH A CONDITION RESEMBLING ANGIO-NEUROTIC ŒDEMA, CAUSED ONLY BY EXPOSURE TO THE SUN'S RAYS. S. B. Ward. (*New York Med. Journ.* and *Phila. Med. Journ.*, April 15th, 1905, p. 742.)

The patient, aged 47 years, had scarlatina when 3 or 4 years of age, but never acute articular rheumatism. She had always been "nervous," and when seen in October, 1904, had just completed the menopause. On June 1st, 1903, when working in the garden, there appeared on both arms and the back of the neck elevated white patches and streaks, accompanied by very severe itching and burning. The next appearance was on the 22nd of the same month, when the eruption was confined mostly to the forehead. In August, while rowing, it appeared again, and this time on the ankles as well, which were accidentally exposed by the skirt being pulled up a little. In the autumn of 1903 the itching began to come on almost every time she went out of doors. About one day in twenty during the past year she was able to go out of doors without the eruption appearing; the other nineteen days it was certain to come. At times it appeared also if clouds concealed the sun but the wind was blowing. Two thicknesses of clothing would prevent it appearing on covered parts. If she remained out of doors more than about an hour the eruption would gradually disappear and not return again during that exposure. On returning to the house the eruption

would disappear in from ten minutes to an hour, depending on the length and degree of the exposure. A trial exposure to the sun for ten minutes caused the skin exposed to rise in temperature ten degrees and become of a uniform brilliant scarlet colour, as if affected with scarlet fever. The skin was so swollen that there was some impediment to flexion at the elbow-joint. The hairs all stood up straight in marked contrast to the non-exposed skin, and the sensation of burning was said to be intense. About a dozen white round wheals, like those of urticaria, accompanied by marked itching, also made their appearance. Fifteen minutes later the swelling was about the same, but the redness and burning sensation less; the wheals had coalesced. Tactile sensation and sensation to heat and cold was perfect. Blood examination showed 90 per cent. hæmoglobin, colour index 1·1 per cent. On another occasion her lips became so swollen after exposure as to be very uncomfortable.

Exposure to X-rays or to a hot fire produced no effect. When one arm was bared, and part exposed to the direct rays of the sun, another part covered by yellow glass, and another by red glass, also exposed to the sun for five minutes, it was found that the unprotected part showed the signs above enumerated, that covered by yellow glass showed moderate redness without burning or itching, that covered by red glass showed no signs whatever.

A case of urticaria has been reported by Osler where the eruption appeared each time that the patient was exposed to a temperature of 40° F., and Ward relates the case of a girl in which the skin remained remarkably sensitive to changes of temperature after having once been frozen.

J. L. B.

THE ACTION OF FINSEN LIGHT ON NORMAL SKIN. Franz von Veress. (*Monats. f. prakt. Derm.*, April 15th, 1905, p. 429.)

Exposure to Finsen light for an hour causes the following changes in the skin: (1) Acute inflammation symptoms—œdema, formation of blebs, dilatation of vessels and thrombosis, exudation of leucocytes and lymphocytes; (2) injuries—vacuolation of epithelial and giant-cells, degeneration or necrosis of epithelium, hæmorrhage and hyaline degeneration; (3) reaction symptoms—growth of collagen and connective tissue, mitoses in epithelial and endothelial cells, finally pigment and leucocyte journeyings towards the source of light.

There results, therefore, a superficial inflammation accompanied by various tissue injuries, and by dilatation of deeper vessels and emigration of leucocytes from them. There follows a diminution of inflammation parallel to the increase and generalisation of the reaction symptoms, resulting in hypertrophy or proliferation of fixed tissue elements.

J. L. B.

RESULTS OF LIGHT TREATMENT IN ALOPECIA AREATA. Kromayer. (*Monats. f. prakt. Derm.*, July 1st, 1905, p. 1.)

The cases brought forward only include those treated up to the end of last year, and in these some idea of the final result can be formed. They are divided into two groups, the first including the less severe cases, where a smaller area than half the scalp was bald, the second being composed of total alopecias and cases where more than half the scalp area was involved. The total results showed

twenty-eight successes to five failures. In the first group there were no failures, in the second 25 per cent. failures (five failures to fifteen successes).

The rays employed were those of cold iron light, the skin being from 4 to 10 cm. distant from the electrodes, and the time of exposure from thirty seconds to ten minutes or more. The number of exposures must be dependent on the skin reaction, redness, pain, and formation of blisters, as seen on the day following the exposure. If the different patches have reacted in different ways, those which show but slight reaction must have additional exposures. If an intense inflammation has been produced, the light exposures must be omitted until the inflammation has subsided, and then recommenced. In some cases new hairs have made their appearance on the bald patches in as little as forty-eight hours after the first exposure, but this does not appear to be the rule.

J. L. B.

THE VERNIX CASEOSA, HEREDITARY SEBORRHŒA, AND FŒTAL ACNE. L. Jacquet and Rondeau. (*La Presse Médicale, No.* 22, 1905.)

The writers have studied the distribution, quantity, and microscopical structure of the vernix caseosa in a considerable number of cases, with the following results: The old statement that this substance is merely provided by Nature to protect the delicate skin of the fœtus from the deleterious action of the amniotic fluid is untrue, and should be entirely abandoned. In a series of 287 cases they examined it was entirely absent in 50, and slight or very slight in 99—that is to say, it was insufficient to cause any real protection in 51 per cent. Moreover, the parts of the surface where the vernix is present, or if general is most marked, are constant in all cases, yet those parts of the surface where it is absent are not in any way harmed by the liquor amnii. Its chief localisations are on the back, especially the spinal groove, the shoulders, and the lumbo-sacral region, after these the eyebrows, ears, inguinal and axillary folds, and the palmar and plantar regions. It varies in consistence, being thick and sticky, or thin and loose. Histologically, it contains three chief elements: (1) Very numerous cells, usually of the epidermic type; (2) free fat; (3) lanugo hairs found in considerable numbers in the removed vernix, and in sections of skin covered with vernix the *débris* of hair forms in places a regular matting over the skin. Thus there is evidence of very great pilo-sebaceous activity in the fœtus.

Another evidence of this activity is afforded by the numerous cases in which fœtuses from the seventh month and onwards to full term present the signs of miliary sebaceous acne, usually on the face, but sometimes on other parts, the only exception being the palms and soles. It consists of yellowish, rounded granules, transparent and like a minute pearl. Those on the nose are somewhat coarser, and show in the centre a minute white hair. In some cases there is a red base simulating the indurated Acne vulgaris. Sometimes the nose in these cases feels cold and soft. On gentle pressure minute filaments of sebum can be expressed, which give the surface a frosted appearance. This may be repeated daily with the same result until the fifth day after birth, after which the activity of the follicles seems to regress. Microscopically, dilated sebaceous ducts can be seen in section, distended with secretion. The authors call attention to the fact the sites of localisation of the vernix are also in the fœtus, the sites of chief lanugo

formation, and that whilst the hair of the scalp renews itself, the hair system of the trunk in these regions never develops again to a similar extent. They compare the lanugo hair of an infant in these regions to that seen in the animal kingdom generally, thicker, stronger, and more coloured on the dorsal surface, thinner, more silky, and less coloured on the ventral surface, and they ask the question, "May not this be an atavistic phenomenon?" At any rate, the vernix caseosa may be in part explained as the activity of an abundant pilo-sebaceous system in a state of involutive crisis.

The authors made a series of careful inquiries into the past history of the parents of infants with excessive vernix, with the following results: Amongst those infants whose parents were markedly pathological 60 per cent. had much, whilst amongst those who parents were normal only 41 per cent. had much. From that they argue that the vernix is an acute kerato-seborrhœa produced by a pathological excitation on the part of the plasma of the parents, fixed in its localisation by a cutaneous excitation on the part of the fœtus. Finally, as regards the occurrence of fœtal acne, they look upon it as a manifestation of an hereditary seborrhœa. They note the coincidence of genital development, mammary growth, and facial miliary seborrhœa in the fœtus, the quiescence of these sets of organs during infancy, and their awakening at the advent of puberty, when adult seborrhœic changes recur. They deny the pathogenic activity of any micro-bacillus in the actual production of seborrhœa.

ARTHUR HALL.

FURTHER OBSERVATIONS ON A PATHOGENIC MOULD FORMERLY DESCRIBED AS A PROTOZOON (COCCIDIOIDES PYOGENES). W. OPHÜLS. (*Journ. of Exper. Med.*, vol. vi, February 4th, 1905.)

IN consideration of the controversy which has recently been taking up the attention of several of our American colleagues with regard to the relation of the fungi of "blastomycetic dermatitis" and "Dermatitis coccidioides," the present paper is of special interest. In June, 1900, Dr. H. C. Moffitt and the writer of this paper published in the *Philadelphia Medical Journal* a preliminary report on a "New Pathogenic Mould, described as a Protozoon, and named by Rixford and Gilchrist 'Coccidioides immitis' and 'C. pyogenes.'" In the present paper a more detailed description of the observations then communicated is given, further developments of the subject are referred to, which tend to confirm the original conclusions of the writers, and an additional case is described. From a series of experiments on the protozoon-like bodies found in the various cases examined by the writers, they conclude that these "bodies" belong to the life cycle of a pathogenic mould, which they were able to cultivate on artificial media. When the parasite develops in the animal body it appears in the form of protoplasmic spheres surrounded by a thick double-contoured membrane, and propagates itself by endogenous sporulation; when it grows on artificial media it produces a mycelium, and at the end of the aerial hyphæ of this mycelium chlamydospores are formed, which, when brought into new artificial media again reproduce the mycelium, and so on. In case, however, these chlamydospores enter the body of a susceptible animal, they develop into protozoon-like bodies with endogenous sporulation. These propositions have been experimentally

proved in two ways. First, animals have been inoculated with pure cultures of the mould which did not contain any protozoon-like bodies, and have developed a disease, in the lesions of which protozoon-like bodies were found in pure culture and no mycelium. From these diseased spots the mould has then again been obtained by cultivation. Second, development of the different stages into one another has been directly traced under the microscope, formation of a mycelium from the protozoon-like bodies and their spores in the hanging drop, and development of the chlamydospores into protozoon-like bodies in a subcutaneous abscess in a rabbit. The organism has not yet been satisfactorily classified. It appeared to be different from the blastomyces which the writer had the opportunity of studying from Dyer's case of "blastomycetic dermatitis." According to Berfeld's classification of fungi, the organism seemed to belong to the group of the ascomycetes, but as this is not certain, the writer prefers to leave the adoption of a generic name for the future, and use the name suggested by Rixford and Gilchrist, namely "Oidium coccidioides."

After summarising various cases and a series of experiments upon them, the writer formulates the following conclusions:

(1) The disease, which formerly has been described as a form of protozoon infection, is due to an infection with a pathogenic fungus.

(2) The infection may primarily be either a cutaneous or a pulmonary one.

(3) The lesions produced by this fungus fall under the general head of infectious granulomata, and consist partly in nodules resembling altogether those produced by the tubercle bacilli, and partly in chronic abscesses.

(4) The adult forms of the parasite are more apt to produce nodules, the sporulating forms abscesses.

(5) The fungus is pathogenic for dogs, rabbits, and guinea-pigs—probably other animals also—and in them produces lesions very similar to those which we encounter in the human being.

J. M. H. M.

PSEUDOALOPECIA ATROPHICANS CRUSTOSA. Dr. Wilhelm Wechselmann. (*Derm. Zeitschr.*, February, 1905, p. 112.)

The patient, aged 16 years, had developed the disease in the second year of life. At times it had healed and then returned. He presented bald patches scattered over the scalp, the largest of which, on the summit, reached the size of a five-mark piece. The skin over these was pale, shining, tense, and only moved with difficulty on the parts beneath. Surrounding each patch was a narrow zone of red, and only slightly infiltrated, skin. Here and there hairs, either single or in groups of two and three, remained, being surrounded at their point of emergence by a brown crust. When the crusts, which were conspicuous also in the red zone, were removed, a blue-red, moist, thin epidermis came into view. In places the crust dipped down into the follicle, leaving a depression on removal. Histologically there was found œdema and crust formation of the epidermis, and an inflammation of the cutis, marked by a general increase of connective-tissue cells and by a fairly thick infiltration of lymphocytes, immediately beneath the epidermis. There were no plasma, mast, or giant-cells, or elacin. There was atrophy of the hairs and complete disappearance of the sebaceous glands. The process

belonged to Unna's ulerythema group. It is noted that the patient suffered from scrofula. No bacteriological details are given.

W. B. W.

THE ANATOMY OF DERMATITIS PAPILLARIS CAPILLITII (KAPOSI). Dr. JOSEF GUSZMAN. (*Derm. Zeitschr.*, March, 1905, p. 139.)

AFTER a brief historical review the author proceeds to give a description of three cases observed by himself. In the first two the disease occupied the usual position, namely the neck just beneath the hair margin. In the third case the parietal regions of the scalp were affected. In none of them was it possible to demonstrate a follicular origin, such as is often assumed.

The histological examination of material derived from two of the cases tended to support Ledermann's contention that the disease starts in the upper part of the tunica propria of the corium in the form of small groups of cells, lying in the neighbourhood of the blood-vessels, but having no relationship at first to the pilo-glandular apparatus. Later the cell collections increase in area so as to coalesce, and then the papillary body is invaded. There is at this stage a distension of the blood-vessels and an increase of capillaries, but the author found no indication of the huge increase and branching of the papillæ noted by Kaposi. The cell collections at first consisted of round cells, but later plasma-cells appeared in great numbers, as also fibroblasts. Mast-cells were present in all stages and in great numbers. Giant-cells were present in Case 1. Their nuclei were irregularly distributed over them, not as in the Langhan's type. Ledermann had noted both types in one case.

As the disease proceeds there is a steadily increasing formation of fresh scar-tissue. Ledermann maintains that this increase of fibrous tissue is accompanied by an increase of eosinophile-cells, and of Russell's bodies, and considers these signs as indicating a degenerative stage. The author is unable to support this contention, since he found neither cells nor bodies. The sebaceous and sweat-glands in the early stage are quite unaffected, but later undergo atrophy and disappear. No organisms could be found in the corium.

W. B. W.

A CASE OF HYPERTRICHOSIS SACRALIS. Dr. MAX MARCUSE. (*Münch. med. Wochenschr.*, February 7th, 1905, p. 261.)

THE patient showed in the upper sacral region a pronounced hypertrichosis. According to his account the hairs, if uncut, reached down to the middle of the thighs in the course of a few years. The anomaly was noted at birth. It was not accompanied by any signs of spina bifida, nor was any other congenital anomaly present. The case was exhibited before the Fifth International Dermatological Congress.

W. B. W.

THE TREATMENT OF ULCUS CRURIS AND OF CONDITIONS LEADING TO IT. Dr. HANS VÖRNER. (*Münch. med. Wochenschr.*, February 21st, 1905, p. 350.)

THE author recommends a treatment of these conditions which he has found in practice to be useful. He employs two long, thin elastic bandages, one being

superimposed on the other in order to equalise pressure and to prevent folds. The patients soon learn how to apply them properly. In cases where, owing to indolence or stupidity, difficulties arise, he employs a jelly of the following composition: Tragacanth ½ per cent., gelatine 10 per cent., glycerine 5 per cent., acid boricum and borax āā 5 per cent., water 75 per cent. The affected part is dressed with a suitable medicament, and then the rest of the leg is smeared with the melted jelly, on which the first bandage is evenly rolled. The bandage is also smeared with jelly before the second one is applied. For removal the leg is soaked in warm water.

W. B. W.

A CASE OF CIRCUMSCRIBED SCLERODERMIA TREATED WITH A MESENTERIC GLAND PREPARATION. Dr. C. Schwerdt. (*Münch. med. Wochenschr.*, March 14th, 1905, p. 509.)

Acting on the theory that in sclerodermia an intestinal toxin enters the lymph-vessels without being acted upon by the mesenteric glands, Dr. Schwerdt treated a girl, aged 9 years, suffering from an extensive patch of the disease covering the left shoulder, with a preparation of mesenteric glands. The result obtained acording to the author was excellent. The case began to improve shortly after the treatment was commenced.

W. B. W.

MYCOSIS FUNGOIDES. V. Ramazzotti. (*Giorn. Ital. d. Mal. Ven. e della Pelle*, fas. 2, 1905.)

The patient, a widow, aged 32 years, had noticed for about a year red spots on the skin, which never entirely disappeared, and were accompanied now and then by pains in the joints. For three or four years in the summer the skin had been red and itchy, and scratching was followed by the discharge of clear fluid; this disappeared after simple baths.

In the previous summer (1903) the itching did not disappear, and in the autumn swellings were noticed—one on the left side of the neck, one near the umbilicus, and a third in the left axilla. They were incised without finding pus. Some swellings, after attaining a certain size, disappeared, while others broke down. Arsenic, long continued, gave no relief; iodide of potash was given, and also injections of perchloride of mercury. A week's inunction caused stomatitis, the only trouble there had been in the mouth.

On admission, March, 1904, the blood-count showed red cells 6,000,000, white cells 106,000, hæmoglobin 60 per cent.

Warm baths were given, and salicylic fomentations applied; internally quinine was ordered, then liquor arsenicalis and nuc vomica. After temporary improvement the patient died in three months. Sections from the tumours showed that they mainly occupied the cutis, sometimes extending as far as the papillary layer. The lymph-spaces and vessels were notably dilated. The cutis was occupied mainly by an infiltration of small cells, with single nuclei; these took basic stains and had the appearance of lymphocytes. Besides these were other cells, which were swollen and had oval nuclei, a few cells with mitosing nuclei, a few mast-cells, and occasional cells with acidophilic granules. Supporting the cells there was a fine connective-tissue framework, traversed by scattered capillaries, some con-

taining granular matter. Round all the vessels the connective-tissue elements were elongated and fusiform, with a well-defined nucleus, and there were some mast-cells. In the papillary region there were fewer mononuclear elements, less connective tissue, and a limited number of mast-cells. The lymphatic glands contained cells similar to those in the skin, and mononuclear cells, which appeared to be new connective-tissue cells. In the spleen there was an abundance of lymphoid cells, especially round the vessels, some of which were dilated, while others had thickened walls. The bone-marrow contained an excess of cellular elements, having the characters of neutrophil myelocytes, with here and there mononuclear acidophils; small cells were seen that appeared to be lymphocytes, and there were some nucleated red cells. The vessel walls were thickened, but the intima was not increased. In the liver there was fatty degeneration. In the kidney some glomeruli were destroyed by dilation of the capillaries, and in places the connective tissue was increased.

T. P. B.

ON THE RELATION OF VITILIGO AND SYPHILIS. Thibierge. (*Ann. de Derm. et de Syph.*, February, 1905, p. 128.)

Vitiligo has been supposed by many authors to be frequently, if not always, associated with syphilis; Pierre Marie in particular has been convinced of this association by his experience with tabetics and the frequency with which vitiligo is observed in these cases. Thibierge combats this view, and adduces in support of his opinion three remarkable cases in which vitiligo developed from one to three years *before* the contraction of syphilis, so that these cases could hardly have been "syphilitic" at the time of development of vitiligo. Vitiligo cannot, therefore, be considered a sign of syphilis; but this may be one of the causes, probably by the intermediary of the nervous system, which is so frequently affected in syphilis. Thibierge has seen vitiligo commence apparently in the site of ulcerated syphilitic lesions, and become generalised from this initial patch. Distinction must be made between the "leucoderma syphiliticum," which is really a pigmentary syphilide, occurring usually early in the disease, and probably occupying the position of earlier manifestations (such as roseola) and vitiligo, which has no such precursors. The paper is illustrated by two photographs.

E. G. L.

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RESEARCHES INTO THE ORIGIN AND STRUCTURE OF MOLES, AND THEIR RELATION TO MALIGNANCY.

By WILFRID S. FOX, M.A., M.D., M.R.C.P.,
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(*Continued from page* 59.)

Material from which Histological Specimens of Nævi were obtained.

The following specimens, seventeen in all, were imbedded and cut in paraffin in the usual way, and the following methods of staining have been used:

(1) Borax methylene blue; (2) borax methylene blue and neutral orcein; (3) Delafield's hæmatoxylin; (4) polychrome methylene blue; (5) polychrome methylene blue and orange tannin; (6) water blue and saffranin; (7) Pappenheim's method (pyronin and methyl green, differentiated with an alcoholic solution of resorcin); (8) cochineal alum; (9) Van Gieson's method.

The material has been obtained from the following sources:

Numbers I and II were kindly sent to me by Mr. Howell Evans from his out-patient practice.

Numbers III, IV, XI, and XIV came from the pathological laboratory at St. George's Hospital, and I am indebted to Dr. Rolleston for his kindness in allowing me to make use of them.

Numbers V, Xa, Xb, XII, XIII, XVI were taken from the post-mortem room at St. George's Hospital by the kind permission of Dr. Trevor.

Numbers VII, VIII, XV Dr. J. M. H. MacLeod, of Charing Cross Hospital, was good enough to give me.

Numbers VI and IX I obtained from out-patients at St. George's Hospital.

For histological purposes it will be advisable to arrange the material in the following groups:

Group A.—Those taken from young infants, showing the development of the mole (I and II).

Group B.—Those showing the mature mole in the adult, when the "snaring-off" process has finished (III, IV, V, VI, VII, and VIII).

Group C.—Hard nævi (Numbers IX, Xa, Xb, XI, XII, and XIII).

Group D.—Those becoming malignant (Numbers XIV, XV, and XVI).

Many other pieces of tissue have been cut, but on examination have proved useless for the present purpose.

Description of the Histological Specimens.

I (*Vide* Figs. 13, 14, 15).

The tissue was removed from the scalp of an infant aged 4 months, and is shown in position in Photograph number 1. It was not present at birth, but was noticed when the child was one week old, and since then it has grown steadily in size and become darker in colour.

Under low power it shows the epidermis normal in thickness, but with very definite cell-nests in several places; these are seen first of all in the early stage, where groups of cells have separated themselves off from their surroundings and lie in clear spaces in the epidermis; and secondly where the nests are more mature and are bursting through the basal layer into the corium, where the collagen bundles are seen surrounding them as if the cells were foreign bodies. The clear distinction between the epidermal elements and the corium is seen best in the orcein specimen. The corium is normal except for the presence of the oval cell-nests which are ensnared in its upper part; there is no sign yet of formation of the columns which are found in the more mature mole.

Under the high power the basal layer of the epidermis is quite well-marked except where the nests have ruptured it. Nowhere is there any connection between the nævus-cells and the lymph or blood-vessels, which can be seen running horizontally below the nests forming the sub-papillary plexus. The individual cells take the stain rather more deeply than the neighbouring epidermis, and are in some places more loosely adherent and in others more irregularly clumped

together, so that they do not give the definite epithelial appearance which is seen in the normal epidermis.

The pigment is confined to the cell-nests and the basal layer of the epidermis.

II (*Vide* Fig. 16).

This specimen was taken from the back of an infant aged 10 weeks. The mother was unable to say whether the mole was present at birth or not. It has increased in size since Mr. Howell Evans saw it, eight weeks ago. The child also shows a meningocele and a vascular nævus.

Under low power exactly the same process is seen going on in the epidermis as in the previous specimen; there is the same formation of cell-nests and the same down-growth of the nests into the corium In one place a hair-follicle is cut almost longitudinally, and throughout its entire length metaplasia of the epidermal cells forming its wall can be seen. Even with the low power the pigmentation is marked, and is to be confined to the cells of the nests in the epidermis and to the few cells in the corium which have already been snared off by the collagen. The corium, as one would expect in so young a mole, only contains a few nævus-cells just below the epidermis. The mole is remarkably hairy when one considers the age of the child and the position on the body from which it came.

Under a high power the cells in the nests are seen to be less firmly adherent to each other than the neighbouring prickle-cells, and sometimes to lie quite free in the oval spaces; there is, however, no intercellular substance. Pigmentation, which occasionally is so marked that it obscures the cells altogether, is certainly intra-cellular as regards the epidermis, but in the corium it appears in some places to diffuse into the neighbouring collagen bundles. Mast-cells are not increased in number as they are in the fully-developed moles. This specimen and the previous one seem to me to show clearly the epidermal origin of the nævus-cells. They also demonstrate that pigment, if not the cause of this instability and metaplasia of the prickle-cells, is at any rate a concurrent event.

III (*Vide* Figs. 17, 18, 19).

The tissue was taken from the skin over the breast of a woman who

was operated on for scirrhus; it had no connection with the underlying malignant growth. The growth, viewed as a whole, is irregular, but for the most part of the soft mole type. In one or two places, however, cornified material has collected in the clefts.

Under a low power the epidermis is seen to be thin, as one would expect from the position on the body. Pegs of epidermal cells can be seen which dip down into the corium, several of them ending in fine processes which are directly continuous with the columns of nævus cells. The process by which one fades into the other is quite gradual and could not be accounted for by the section being cut obliquely. Nowhere is there any evidence of epidermal cells separating themselves off in the epidermis itself and forming nests, or attempting to break through the basal layer as is seen in Specimens numbers 1 and 2. In the corium the typical structure of a mature soft nævus is seen, and it consists of parallel columns of so-called nævus-cells supported on each side by collagen bundles; between the individual cells of the columns there is, for the most part, no collagen, and the cells are in close apposition, almost as in the epithelium itself. In the borax methylene blue specimen there is one place in particular where there is undoubted continuity between an epidermal peg and the nævus-cells; also in the orcein specimen a long thin peg is seen merging into the cells in the corium, which is shown in the accompanying micro-photograph. In some places there is a thin streak of collagen between the epidermis and the nævus-cells in the corium, but often it is entirely wanting. The infiltration of cells ends abruptly at the level of the subpapillary plexus, several vessels being cut across at the base of the growth, the growth itself being, as is usual, rather deficient in blood-vessels.

Under high power the resemblance between the epidermal cells and the cells in the corium is even more marked, the nuclei being oval and clear, containing very few chromatin bodies.

IV (*Vide* Figs. 20, 21).

The tissue was taken from the Pathological Laboratory of St. George's Hospital, but unfortunately, I was unable to obtain any history as to its origin. It is an example of a mixed nævus; that is to say, it is an ordinary soft mole in so far as the infiltration of cells

in the corium is concerned, but, in addition, there is a heaping up of cornified material on the surface.

Under a low power the growth, as a whole, is seen to be irregular on its surface, and studded with deep clefts. The cornified material is arranged in large, irregular masses, in most places showing concentric rings, and does not resemble the normal stratum corneum. The subjacent epidermis is exceedingly irregular, and in places forms a network which at one time encloses keratinous material, at another corium. It is thin, and the granular layer is not as well marked as is usual in cases of hyperkeratosis. The corium is infiltrated with masses of nævus-cells arranged in two ways—(*a*) more or less circular clumps; (*b*) typical columns, which, owing to the irregularity of the growth, seem to run at one time perpendicularly to the surface and at another horizontally. The infiltration ends more or less abruptly about the sub-papillary layer. There are islands of cells in the corium which so closely resemble the cells of the epidermis as to show that they took their origin from that layer; there are also round clumps of cells, which are the so-called nævus-cells, and there are many round foci, which show the various intermediate stages between these two. That is to say, their cells are not quite so close together, and not so epithelial in effect, as the true epidermal island, but yet more so than the clumps of nævus-cells. The irregular pegs of epidermis can be seen dipping down into the corium and ending in some places by a process of gradual alteration in shape and staining power in cells of the nævus-cell type, or, at any rate, indistinguishable from the nævus-cells in the neighbourhood. In one place, in the borax methylene blue specimen, a curling capillary is cut across just below the growth, and the endothelial cells appear quite different to the nævus-cells just above, the nuclei under high power being much more spindle-shaped than those of the nævus-cells, and showing no vesicular formation. Mast-cells are fairly common. In the orcein-stained specimen a fine network of collagen is seen supporting the parallel columns. The pigment is distributed more or less evenly, chiefly in the cells of the basal layer of the epidermis, but also in some of the nævus-cells in the corium, and particularly in the large multinucleated cells; it is everywhere intra-cellular.

The specimen was obtained from the post-mortem room of St. George's Hospital, and was taken from the inner side of the thigh of

a patient who died of cancer of the stomach at the age of fifty-four. Viewed as a whole, it is an example of a small, fairly deeply pigmented soft mole.

Under low power the epidermis is seen to be normal in thickness, but over the area occupied by the mole there are a few irregular pegs running down into the corium; these, however, do not appear to have any contact with the underlying nævus-cells. In the corium an irregular infiltration of cells is present which is not arranged in columns or in definite clumps. At one place the cells approach very close to the quite horizontal epidermis above them, but do not actually touch it. The nævus tends to shade off gradually into the collagen at the sides of the section, but its lower margin is sharp. The vessels can be seen, as is usual, below the growth and have no apparent connection with it.

Under a high power pigment is seen in the epidermis and chiefly in the basal layer but also higher up; it is even present in the desquamating stratum corneum. In the corium the pigment is scattered about in large masses, for the most part in and sometimes obscuring the nævus-cells, but also apparently free between the neighbouring collagen bundles. The area of distribution of pigment in the epidermis and corium coincide exactly, so that at the side of the mole epidermis is seen quite free from pigment. The nævus-cells have their usual characteristics, and can be seen in the corium specimen to be separated by the collagen into irregular groups. Mast-cells show a localised increase in the corium below the mole. Although there is no definite proof, I think there can be little doubt that this mole is of epidermal origin, when one considers its general aspect, more especially in the light of the previous specimens.

VI (*Vide* Fig. 22).

The tissue was taken from the mid-line of the nose of an out-patient aged 37, who complained that it was unsightly and made her squint. The mole had been present as long as she could remember, but at times she thought it was more noticeable than at others.

Under a low power the tissue presents the ordinary structure of a mature soft mole. The epidermis is normal in thickness and shows many irregular pegs, which dip down into the corium and are in some

places continuous with the groups of nævus-cells. There is one place in the hæmatoxylin specimen where a cell-nest is seen, apparently in the process of formation in the epidermis. In the corium the cells are collected into irregular masses, although occasionally there is some attempt at parallelism. In addition to the continuity between these nævus-cells and the epidermis, islands of cells may be noticed, precisely as were seen in Number 4, which are clearly epidermal cells, and which appear cut off in the corium owing to the obliquity of the section; there are also deeper to these round clumps of cells, which are nævus-cells, and between the two are seen foci, which are intermediate in appearance. The sebaceous glands are seen to be very large, which is only to be expected in this situation on the body, and seem to have no particular connection with the mole. Under high power the pigment is seen sometimes in large branching masses in the corium, where it does not appear to have much connection with the nævus-cells, but rather with the collagen. It is also present in small quantities in some parts of the basal layer of the epidermis. The individual nævus-cells are of the usual type, and here and there a few multi-nucleated cells may be seen. The mole appears to me to be clearly of epidermal origin.

VII.

This specimen came from Dr. J. M. H. MacLeod's laboratory. Clinically it had the appearance of a pale mole, but Dr. MacLeod was unfortunately unable to supply any further particulars. To the naked eye it was pale yellow in colour, soft, and slightly hairy.

Under low power the epidermis was seen to be perfectly healthy, though rather thin, which would probably be accounted for if the part of the body from which it came were known. There are a large number of hair-follicles seen cut across in the upper part of the corium. The corium itself consists of a fine meshwork of collagen which does not take the orcein stain satisfactorily; at one side of the growth some normal collagen is shown perfectly well stained. This meshwork, which in the upper part is very loose, and contains only a few cells, is lower down densely packed with cells of various shapes; there are, amongst others, a large number of giant cells. In the deeper parts the growth appears to be undergoing fatty degenera-

tion, and gradually merges into the subcutaneous fatty tissue. It goes very much deeper than any of the other soft moles seen above, and its lower limit is not shown in the specimen.

Under high power the cells in the corium are seen to be sometimes round and sometimes spindle-shaped, like those of a spindle-celled sarcoma. The nuclei of the giant-cells are not seen arranged round the periphery like those of tuberculosis, but they are shown collected together in a clump, either in the middle or at one end of the cell, leaving a space of clear protoplasm at the other.

As regards the origin of the cells in this nævus no opinion can be given; there is certainly no evidence whatever that they have arisen from the epidermis, as in the other cases. The presence of fatty degeneration would suggest the name of "nævo-lipoma" if that name had not already been given to another class of tumour.

VIII (*Vide* Fig. 23).

The tissue was removed from the arm of a student at Charing Cross Hospital on account of a slight increase in size which the mole was undergoing; it had, however, been present since childhood. I was able to procure only one specimen, and that was due to the kindness of Dr. MacLeod. The mole, which I understand clinically appeared of the ordinary smooth, pigmented type, is histologically very peculiar. Under low power it has a structure like a fibroma, and is pigmented. The epidermis is normal; no long pegs can be seen dipping down into the corium, and with this power no pigment can be detected, although with the higher magnification a faint trace is seen in the basal layer. The corium consists of wavy fibrous tissue, between the bundles of which large diffuse masses of pigment can be seen almost obscuring the few cells there are.

Under high power the cells between the collagen bundles in the corium become more evident, and are seen to be more spindle-shaped in appearance than the ordinary nævus-cells. The pigment is both intra- and extra-cellular, and is in one place seen in the wall of a blood-vessel. It is impossible to give a definite opinion as to the origin of the cells in the corium, but there certainly is no evidence in favour of the source being epidermal; and I would suggest that they are probably mesoblastic, in which case, supposing this tumour were to become malignant, it would be a true melanotic sarcoma.

IX (*Vide* Fig. 24).

This specimen was taken from a girl, aged 17 years, who came to St. George's Hospital complaining of a small patch of psoriasis on the left knee. A slightly pigmented growth was noticed on the thenar and hypo-thenar eminences of both hands, which was continued up the thumb, curling round on to the dorsum and ending opposite the interphalangeal joint. There was also a thin line running along the radial side of the first finger, and another down the centre of the palm. The growth was almost symmetrical on the two sides, was raised about one eighth of an inch, and was about the colour of a xanthoma. The edges were quite sharp, and were hard to the touch; there appeared to be no induration in the corium, but simply a hypertrophy of the epidermis. The girl said that she had noticed the patches ever since she could remember, but that they became more evident four years ago. It will be noticed that the distribution will not fit in with any of the explanations given above of linear nævi. The same condition was present on the soles of both feet, but here it was somewhat modified by friction. Gaucher describes this type of hard nævus on the palms and soles, and gives it the name of "nævus keratosique" (vol. ii, p. 38). It was also noticed that the second and third toe on each foot were webbed.

The specimen is an example of a hard nævus in which practically all the layers of the epidermis are seen to be involved. The tissue, owing to its irregular density, was extremely difficult to spread.

Under low power the stratum corneum is seen to be much thickened, even when one considers the situation on the body from which the tissue came. It is perfectly normal in structure, and nowhere does it show any attempt at parakeratosis, nor are there any nuclei to be seen. The stratum lucidum is well seen in the borax methylene blue and orcein specimens. The stratum granulosum is well developed, as one would expect in a tissue which shows such increase in the corneal layer. The prickle-cell layer is increased in thickness, but is otherwise normal. The basal layer is well marked, and nowhere is there any suggestion of connection between the epidermis and the cells in the corium. The corium shows a few cells running up into the papillæ, but they are clearly in connection with the blood-vessels, and could

not, I think, be considered under the heading of nævus-cells; they are probably of connective-tissue origin.

Under high power the stratum granulosum shows in the hæmatoxylin, and in the borax methylene blue and orcein specimens some fine dark granules of pigment, which more or less fill up the cells. There are a fairly large number of mast-cells to be seen in the papillary and sub-papillary layers.

X.

The tissues came from the post-mortem room of St. George's Hospital, the two specimens being taken from the same body—10 A from the mid-line of the abdomen and 10 B from the throat. They show two varieties of hard nævi.

10 A under a low power is seen to consist for the most part of a tumour formed of prickle-cells, and is therefore of the acanthoid type. In a few places cornified material is seen arranged in concentric rings adherent to the surface, or as islands cut off in the midst of the prickle-cells owing to the irregularity of the growth. Irregular-shaped islands of corium are also seen scattered all over the epidermis, which gives the tissue a resemblance to a section of liver; this is due to the obliquity of cutting. The growth ends suddenly below, and the basal layer is seen to be very badly marked, the last layer of cells exactly resembling those more superficial to them. Several tongues of corium are seen running up into the epidermis, conveying vessels, and a few cells are seen in connection with them as in the previous specimen.

Under high power the epidermal cells look rather smaller than usual, and as if they were reverting to a more simple type. Pigment is scanty, and is seen for the most part in the tongues and islands of corium which run up into the epidermis.

X

10 B under a low power is seen to consist for the most part o cornified material, and is therefore of the keratoid type of mole. The cornified mass is arranged irregularly on the surface, and below it is seen an uneven verrucose epidermis. The corium shows a few cells around the vessels, as seen in 10 A.

Under a high power the basal layer is more definite than in 10 A, and the prickle-cells are more similar to those of a healthy epidermis.

In the Pappenheim-stained specimen a few scattered plasma-cells are seen stained in the characteristic way; they are probably due to secondary irritation.

XI

The tissue was taken from the pathological laboratory of St. George's Hospital, but I was unable to obtain any clear history of its origin. As far as memory can be relied upon, it came from the shoulder of an adult. It is interesting in that it is a hairy, hard nævus, most of the hairy ones, so far as I have seen, being of the soft variety.

Under low power it resembles very much 10 A in its general structures, being composed chiefly of prickle-cells; there are, however, a few islands of cornified material in the substance of the tumour, though none on the surface. Islands of corium are also seen cut across, as in 10 A. The epidermal cells are similarly altered and do not give the true epithelial appearance noticed above; the basal layer is not definitely seen, and the growth just ends suddenly. In the corium numerous hair-follicles may be seen.

Under high power much more pigment is shown than in the previous specimen. It is scattered in patches throughout the mass of prickle-cells, and also in the islands of corium. The increase in number of hair-follicles, which are epidermal appendages, in a tumour consisting purely of epidermal cells is as one would expect; the surprising thing is, that one does not see more of these hairy hard nævi.

XII.

The specimen was obtained from the post-mortem room of St. George's Hospital, and was taken from the shoulder of a man who died of heart-disease at the age of thirty-nine years. It shows a hard nævus, combining both the acanthoid and the keratoid varieties, although in some sections much of the cornified material has been torn away.

Under a low power the stratum corneum is very loosely adherent to the underlying epidermis, and is arranged in the usual parallel or concentric layers. The prickle-cell layer, which forms the bulk of the growth, is very irregular, enclosing a few islands of cornified material and many irregular spaces filled with corium. The growth ends fairly suddenly at its sides, and the normal epidermis is seen to

blend with the acanthoid mass. The corium, which is enclosed in the mass of prickle-cells, and which runs up into the epidermis, is clearly different from the normal collagen below; it presents a blurred, œdematous appearance, and it ends quite sharply just a little deeper than the prickle-cells extend; so that, although the base of the mole is very irregular, this altered collagen forms for the growth a kind of bed, which is quite smooth and horizontal on its lower surface. This collagen seems to attract basic dyes more powerfully than usual, and is in the condition which has been called "basophilic degeneration."

Under high power the basal layer is fairly well marked in most places, although in some there is very little difference in appearance between the cells that form it and those immediately above. The pigment is confined to the epidermis, and is seen both in the basal layer and scattered about in the prickle-cells.

XIII.

The specimen was taken from the post-mortem room of St. George's Hospital. The growth was found in the mid-line of the abdomen of a woman who died at the age of fifty-six of generalised tuberculosis. Viewed as a whole, the growth was seen to be of an irregular mushroom shape.

Under low power one sees that the tumour consists of a sharply localised hypertrophy of epidermal cells, which, owing to the irregularity of the growth, includes some islands of cornified material. There are also some branching processes of corium, which run up into the epidermis with a papillomatous-like arrangement, and which are occasionally seen as isolated patches. The corium is sharply marked off from the epidermis, but a few collections of doubtful cells can be seen here and there scattered between the collagen bundles just below the epidermis, running for the most part in a horizontal direction, or enclosed in the branches which shoot up into the substance of the epidermis.

Under high power the stratum corneum is not much thickened, the chief part of the growth being in the prickle-cell layer. The stratum granulosum can be seen as a thin layer stretched on the surface (it is best seen in the Pappenheim specimen). The basal layer of the

epidermis is definite in most places, but in others the epidermis just ends as was seen in Number 2. The cellular infiltration in the corium can nowhere be seen to be directly continuous with the epidermal cells. In shape these cells resemble the plasma-cells of granulomatous tissue, but the specimen stained by Pappenheim's method does not show them differentiated in the characteristic manner (for which see Specimen X). This and the fact that pigment is seen amongst them are points in favour of their being true nævus-cells, and not simply an infiltration due to secondary irritation of the growth. In several places these patches of cells are in definite connection with the blood-vessels, and the individual cells seen under a $\frac{1}{12}$ objective do not bear the same close resemblance to epidermal cells as those seen in Number 3. The pigment is seen to be large in amount and mostly in the epidermis, where it is fairly evenly distributed, although in some parts the basal layer is more deeply pigmented than the rest. Pigment is also seen in the islands of cornified material (best seen in the hæmatoxylin and Pappenheim's specimens). In the corium pigment is seen in the patches of cellular infiltration, and is, in some places, extra-cellular.

This specimen is, then, either a hard nævus with a little infiltration of connective-tissue cells around the blood-vessels, or these cells in the corium are true nævus-cells, and if so they appear to be derived from the blood-vessels and not from the epidermis, but I am distinctly in favour of the suggestion that the cells are due to secondary irritation of the growth.

XIV (*Vide* Figs. 25, 26).

The tissue came from the pathological laboratory of St. George's Hospital, and the following clinical history is taken from the surgical notes. "The patient, aged 44 years, was admitted under Mr. Dent, complaining of a swelling under the left arm, which she had noticed for six months, and which for the last fortnight had rapidly increased in size. The tumour began as a wart, had bled occasionally, was painful, and had an offensive discharge; the patient was not losing flesh. On examination the veins are enlarged over the left shoulder and on the outer wall of the axilla on the inner side of the extreme upper part of the arm is a small rounded growth about the size of a half-crown piece. It is quite flat on the surface with rounded edges, and

is attached by a short narrow pedicle. It is quite black in colour, and apparently arises from the skin or subcutaneous tissue. It is slightly ulcerated in places, is tender and slightly indurated. There is a large tender mass of glands on the inner side of the axilla; the patient also has a painful sensation on examination of the lower part of the left side of the neck, but no glands can be felt. A small wart is seen in the axilla. The growth and the glands were freely removed and the wound healed rapidly." Dr. Rolleston examined the tumour pathologically, and reported that "it was an alveolar growth, some cells of which contained pigment. It should be called a melanotic carcinoma."

There is thus no definite history of a mole preceding the growth, but I think the phrase "began as a wart" is strongly suggestive.

The specimen is an example of the ordinary melanotic malignant tumour. Viewed as a whole, the tissue consists for the most part of corium and subcutaneous tissue invaded by the growth; but at one corner the connection with the epidermis has fortunately been preserved, and here we notice exactly the same process going on as was seen in the young moles (Specimens 1 and 2).

Under low power the epidermis is very thick at one place, when one considers the position on the body from which the growth was taken, and the thickening is chiefly in the prickle-cell layer. On each side of this acanthoid mass the epidermis appears normal in thickness, but shows several places where nests of prickle-cells are separating themselves off from their fellows, and are breaking through the basal layer into the corium, precisely as occurred in Numbers 1 and 2. The basal layer is quite well marked in the majority of places. Immediately below the epidermis the tissue is made up of these nests, which have previously grown down, and still maintain their globular shape; this as one goes deeper down becomes lost. The collagen is conspicuous by its absence; only a few thin fibres, forming a delicate meshwork, can be seen here and there in the orcein specimen. The base of a tumour is for a malignant growth fairly distinct in the subcutaneous tissue, healthy fibrous tissue, fat, and blood-vessels being seen unaffected by the growth.

Under high power the cells forming the nests are clearly epidermal cells, and it is impossible to explain their presence either by the section being cut obliquely or by the growth of a tumour coming

from below upwards and rupturing into the epidermis. As one goes deeper the individual cells as well as the nests as a whole are seen to alter in shape and lose their epidermal oval appearance, becoming more spindle shaped. The pigment is seen chiefly in patches, and is in many places extra-cellular. In the epidermis it is present in some of the cell-nests only. The specimen stained by Pappenheim's method shows numerous plasma-cells stained in the specific way; it also shows the nucleoli of the cells in the cell-nests stained bright pink exactly like those of the prickle-cells close by, and if the older cell-nests be examined which are deep down in the corium, the nucleoli here will also be seen similarly stained, which is an additional point in favour of the epidermal origin of the malignant cells, since the other cells in the corium are not shown stained in this manner. This is, therefore, a melanotic epithelioma, and although there is no definite nævus-tissue left, owing to the complication caused by the fresh down-growths, I think from the general appearance it is probably a nævo-carcinoma also.

XV (*Vide* Fig. 27).

The case from which the specimen came was published by Dr. James Galloway in the *British Journal of Dermatology*, February, 1905, and the clinical history given below is taken from that article. Dr. MacLeod examined the growth histologically, and I am indebted to his kindness for the specimen.

The patient, a man aged 50 years, had noticed two years previously a small nodule, black from the outset, arising from the skin on the front of the right leg. This grew slowly to its present size, which is about that of a small walnut. On being questioned, he admitted that he felt certain that previous to the origin of the small tumour there had existed a small black spot in the same situation as long as he could remember. The patient was in good health, and suffered no pain or inconvenience from the growth. There was no enlargement of the neighbouring lymphatic glands, and no evidence of abnormal pigmentation elsewhere. The tumour was coal-black in colour, of irregular nodulated shape, and had a narrow border not more than one millimetre in extent, of brownish pigment.

The specimen, viewed as a whole, shows an elevated, moderately

young, malignant growth, which has almost certainly arisen from a mole.

Under a low power the stratum corneum is seen to be a little increased in thickness. The epidermis below is also hypertrophied, if one compares it with the healthy epidermis at the side. In some parts the basal layer seems wanting altogether, and the growth in the corium is contiguous with what look like cells of about the centre of the prickle-cell layer; possibly this effect is due to the rupturing of a large cell-nest, as on each side of this long, thin, tongues of epidermis can be seen dipping down into the corium. In the cleft at the side of the growth, near the part shown in the accompanying micro-photograph, cell-nests can be seen forming, and here the epidermis goes down deep as a large mass into the corium, and its cells appear continuous with those forming the growth itself. Pigment, as regards the epidermis, is most marked around this portion—that is to say, where the most active down-growth is going on. It is seen, as coarse, densely black granules, chiefly in the cell-nests and in the basal layer, but it is also present in the other parts of the epidermis, and even in the stratum corneum, which is being shed. The corium in the part affected is almost entirely replaced by growth, only a few collagen bundles being interspersed. At the side the tumour ends rather abruptly, although the pigment is carried on a little further into the healthy collagen. The base of the growth is not shown. Beyond the cleft, but under the portion of the epidermis which is still pigmented, and which doubtless formed the narrow border referred to above, there is an infiltration of small, round cells, which are seen in association with the blood-vessels; they are rather smaller than nævus-cells, and are probably due to irritation of the growth.

Under a high power the cells forming the growth resemble epidermal cells in shape, throughout the whole thickness, much more closely than those seen in the previous specimen, in which the deeper ones were seen to be spindle-shaped. This may point to this tumour being of a more rapidly growing type. Pigment is large in amount, and is diffused evenly throughout the entire growth. The prickles, which are shown well under $\frac{1}{12}$ objective in the healthy epidermal cells, are entirely wanting among the cells in the cell-nests. This specimen is, therefore, an undoubted example of a nævo-carcinoma.

XVI (*Vide* Fig. 28).

The tissue was obtained from the post-mortem room of St. George's Hospital, and was taken from the mid-line of the abdomen of a patient who died of uræmia at the age of eighty-four. I was fortunate enough to see the mole during life, and elicited a history that it had been present as long as the patient could remember. It was a flat, button-shaped mole of the ordinary aspect to the naked eye. There was some difficulty in getting the sections to spread satisfactorily, and some of them will be seen to be crinkled.

Under a low power the epidermis appears to be rather thin even for this part of the body. It is for the most part quite flat on its under surface, but here and there a few irregular pegs can be seen dipping down into the corium. In the epidermis, both over the growth and at the side one can detect clear spaces, in which one or two epidermal cells are seen, suggesting that a process of metaplasia is going on. In a few places these small nests have burst through the basal layer, and the cells are seen in the upper part of the corium. In the polychrome methylene blue specimen this formation of small nests in the epidermis is well shown in the cleft at the side of the growth. In the corium a localised mass of cells is seen, which resemble nævus-cells in individual appearance, but which have no regular arrangement into perpendicular columns. In the deeper parts there is some tendency to parallelism, but this is mostly in the horizontal plane. There is no direct continuity anywhere between the pegs of epidermis and the cells in the corium. The lower limit of the growth is quite abrupt, and although in the deeper part some vessels are seen cut across they have no apparent connection with the nævus-cells.

Under a high power the pigment is seen to be chiefly in the basal layer of the epidermis. The cells in the corium are of the usual oval shape, with clear and sometimes vesicular nuclei. In this specimen there is no evidence as to the origin of the nævus-cells; the metaplasia which is seen going on in the epidermis can have no connection with the formation of the nævus, when one considers the age of the patient and the length of time he must have had it, and also the fact that the nests are small, and that there is no accumulation of them in the corium immediately below the epidermis, shows that the metaplasia is only just beginning. The most probable explanation,

then, appears to be that the growth was just about to become malignant, and that if the patient had not died of uræmia he would have acquired a nævo-carcinoma, which is my excuse for putting this specimen in this group.

Conclusions.

The conclusions that I have come to, then, are:

(1) That in those moles which show the typical columns of nævus cells the cells are epidermal in origin.

(2) That there is a rarer variety of soft moles which show no typical nævus-cell arrangement, and whose origin is uncertain, possibly mesoblastic.

(3) That in the majority cases of nævo-melanoma are nævo-carcinoma.

(4) That melanomata do arise in the skin entirely apart from moles.

(5) That Cohnheim's view of the origin of malignant growths is not borne out by the foregoing observations of the histology of nævo-melanoma.

(6) That the pigment appears to be closely connected with the prime cause, by reason of which moles become malignant, whatever that cause may be.

In conclusion, I should like to acknowledge my great indebtedness to Dr. J. M. H. MacLeod, in whose laboratory and under whose guidance the practical histology of this paper has been done.

Description of Histological Plates.

Fig. 13.—This is a specimen of a young mole, showing epidermal cell-nests, taken from an infant aged 4 months.

Fig. 14.—This is taken from another part of the above specimen.

Fig. 15.—This shows Fig. 14 under higher power.

Fig. 16.—This is a specimen of a soft mole, taken from an infant aged 10 weeks. It shows metaphasia in the cells of a hair-follicle.

Fig. 17.—This is a specimen of a mature soft mole, and shows an epidermal peg in connection with the nævus-cells in the corium.

Fig. 18.—This is taken from another part of the same specimen, and shows the columns and clumps of nævus-cells.

Fig. 19.—This is from the same slide as Fig. 18, and shows similar columns of cells.

Fig. 20.—This shows a mixed mole consisting of columns and clumps of nævus-cells in the corium, and cornified material on the surface.

Fig. 21.—This shows the same spot as Fig. 20 under higher power.

Fig. 22.—This specimen was taken from the mid-line of the nose of an adult, and shows nævus-cells in the corium.

Fig. 23.—This is an example of a pigmented mole which is almost certainly not of epidermal origin.

Fig. 24.—This is an example of a hard nævus, which shows a thickening of all the layers of the epidermis and pigment in the stratum granulosum.

Fig. 25.—This is a specimen of a melanotic carcinoma showing young cell-nests in the epidermis and more mature ones in the corium.

Fig. 26.—This is another part of the same specimen as Fig. 25, and shows fairly recent cell-nests.

Fig 27.—This shows the edge of a nævo-carcinoma, with down-growth of epidermis and active formation of cell-nests.

Fig. 28.—This specimen shows a soft mole in a very old man, with a few small, doubtful cell-nests, re-forming in the epidermis.

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EPITHELIOMA DEVELOPING ON AN X-RAY SCAR IN A CASE OF LUPUS VULGARIS.

By J. M. H. MACLEOD, M.A., M.D., M.R.C.P.

The following note is of interest, as it emphasises the necessity of the utmost care being taken in the treatment of Lupus vulgaris by the X-rays to prevent a severe reaction occurring, with the subsequent production of a telangiectatic scar. The patient, a woman aged 34 years, had suffered from Lupus vulgaris of the face since childhood, for which she had been treated surgically on various occasions, and had subsequently undergone a prolonged course of X-ray treatment. In June, 1902, she came under my care at Charing Cross Hospital, presenting a large X-ray cicatrix occupying the right lower half of the face and extending down to the root of the neck. The scar was evidently the result of a severe X-ray dermatitis. It was smooth and pale in the centre, but towards the periphery it presented a close network of dilated capillaries. Beyond it there was an extensive areola of hyper-pigmentation. So far as the destruction of the lupus went the X-ray treatment had been fairly satisfactory, but the disfigurement was great. She still, however, presented a few foci of active lupus on the left cheek beyond the scarred area and on the back of the neck. These patches were treated by a Finsen-Reyn lamp at the hospital and the patient was kept under close observation. By October, 1902, the improvement in the lesions which had been treated by the lamp was so marked that no definite disease could be detected, and she was consequently discharged, but instructed to report herself at bi-monthly intervals, so that any recurrence might be noted and dealt with. In January, 1904, several of the foci of lupus beyond the scar again became active, and she was subjected to another series of exposures to Finsen light. All this time the X-ray cicatrix had remained apparently sound. In the beginning of 1905 she returned to the hospital and drew my attention to a small reddish-brown patch in the centre of the scar at the level where the top of the collar of her dress rubbed against her neck. This patch was about the size of a sixpence, slightly raised and indurated, and covered by a thickened epidermis which was scaly and almost verrucose. On pressing the blood out of the patch with a diascope there

was clear evidence of an underlying granulomatous infiltration. After a few exposures to the light, which reduced the granuloma but made no impression on the thickened epidermis, she ceased attending the hospital for several months. Last August she returned and the thickening of the epidermis was more marked than when last seen, and the granuloma had recurred. Several exposures were again given, but as there was no marked benefit from them they were discontinued in case they should prove harmful by irritating the epidermis, and the lesion was simply dressed with boracic ointment spread on lint and watched. Ever since it was first noted the patch had steadily grown, and as time went on its borders became more raised, while the epidermis in the centre broke down to form a superficial ulcer, from the surface of which oozed a sero-sanguineous discharge. In October it had increased to about the size of a shilling, and the margins had become so hard that it was considered advisable to have it freely excised. The operation was done by my colleague, Mr. Peter Daniel, who removed not only the diseased patch but a portion of the surrounding X-ray scar. The wound was allowed to granulate up and had healed over by the middle of December. The neighbouring glands at this time were not involved.

On examining the excised tissue microscopically, the following pathological changes were detected. For about a quarter of an inch beyond the active growth the skin presented the histological characters of a cicatrix resulting from a burn with the rays. The epidermis was thin and the papillary body had become completely flattened. The basal layer was ill-defined and its component cells, as well as those of the prickle-cell layer, were more or less degenerated, presenting shrunken nuclei and vacuolated protoplasm. The transitional layers could not be detected, keratohyalin granules had disappeared, and the process of cornification was imperfect, the horn-cells being nucleated and adhering together to form irregular scales. In the upper part of the corium the fibrous tissue had degenerated and was replaced by a rarefied stroma supporting dilated blood-vessels with a thickened endothelium, which were so large in places as to suggest a cavernous tissue. The central three fifths of the section showed signs of malignant changes which had been superimposed on the cicatrix. There the epidermis had proliferated to form a rapidly spreading squamous epithelioma with well-marked cell-nests, the

growth being most pronounced at the periphery of the malignant area; in the centre a mesoblastic cellular infiltration of the corium had broken through the epidermis in places to form a superficial ulcer. Surrounding the epitheliomatous processes was a dense cellular infiltration consisting chiefly of plasma-cells and fibroblasts, which was doubtless tuberculous in origin, though it was not characteristic in that no giant-cell system could be detected, and it resembled more the type of granulomatous infiltration met with in scrofulodermia than in Lupus vulgaris.

The development of epithelioma in cases of old-standing Lupus vulgaris has long been known, but it is a comparatively rare occurrence. Unfortunately, its development on an X-ray cicatrix which has replaced lupus seems to be not infrequent. Mendes da Costa records seven cases out of seventy-two so treated (*La Rev. prat. de Mal. Cut. et Ven.*, 1905, p. 224). In the above case the irritant which caused the malignant proliferation of the X-rayed epidermis may have been the growth of the underlying foci of tuberculosis, the friction of the collar against the neck, or possibly both causes combined.

Cases of this type emphasise the danger of the X-ray treatment of Lupus vulgaris, and the necessity of taking every care to avoid a severe reaction, an accident which is very apt to occur in a tissue the resistance of which has been lessened by the presence of the tubercle bacillus and its toxins.

A NOTE ON THE TREATMENT OF SIMPLE WARTS BY INTERNAL REMEDIES.

By ARTHUR HALL, M.A., M.D.Cantab., F.R.C.P.,
Physician Sheffield Royal Hospital.

In the *British Journal of Dermatology* (vol. xvi, p. 262) I published a case in which very numerous simple warts of the scalp of two years' duration disappeared absolutely in the course of two or three weeks, after the administration of Mist. alba thrice daily for that period. Similar cases had been published previously from time to time, and the treatment is referred to in various text-books on dermatology. After the publication of my case Dr. Chalmers

Watson very kindly referred me to the case which he had published in the *British Journal of Dermatology* (vol. xv, p. 178), in which he had pointed out that the particular drug (sulphate of magnesium) was not essential, but that the free purgation it produced was the factor of importance in treatment. In support of his theory I think it worth while to record the following striking case :

A. M—, a girl, aged 14 years, came to the skin-department of the Sheffield Royal Hospital on November 14th, 1904, complaining of warts on the dorsa of both wrists, hands, and fingers. They had been present more or less from childhood. Her mother says, "certainly for several years," and that some time ago the girl tried to count them, and that there were 367 on one hand and wrist only. Latterly they have prevented her working as a domestic servant. Both hands were literally covered with them. She states that she has always suffered considerably from constipation.

I prescribed Mist. alba ℥ss. *t.i.d.* The following reports of her progress were made :

November 19th, 1904.—No change in warts ; bowels still costive. Ordered Mist. alba, ℥j *t.i.d.*

December 3rd, 1904.—No change, bowels still costive. I thought I would try sulphur in another form and prescribed Conf. sulphuris and Conf. sennæ ʒj āā *o.m.*

December 14th, 1904.—No change, still costive. I gave up the sulphur, and prescribed Pil. aloin (gr. $\frac{1}{2}$) c̄ nuce vomica (gr. $\frac{1}{4}$) ij. *o. n.*

December 21st, 1904.—The warts appear to be shrinking a little. Bowels acting well.

January 4th, 1904.—Distinct improvement, smaller warts disappearing, the larger diminishing in size. Bowels regular.

February 15th, 1904.—Taking pills every night, bowels act regularly, warts all gone from dorsa of hands, but some still remain on the fingers.

March 2nd, 1904.—There are only quite a few shrunken warts left on the fingers.

(On this date I showed this case at the meeting of the Sheffield Medico-Chirurgical Society). During all this time no local treatment whatever was applied.

I do not offer any suggestion as to the mode of action of the purgation, or as to the nature of the association between simple warts

and constipation; but as this is the first case I have seen since the one published above, and as the result has been equally, if less speedily, successful, some such association seems possible.

SOCIETY INTELLIGENCE.

THE DERMATOLOGICAL SOCIETY OF LONDON.

A meeting of this Society was held at 11, Chandos Street, Cavendish Square, on Wednesday, February 14th, 1906, Mr. Malcolm Morris in the chair.

The following cases and specimens were exhibited:

Dr. Graham Little showed (1) a case of *multiple tuberculosis verrucosa cutis* in a boy aged 2 years. The child had had *measles* three months before the eruption had been noticed by the mother. The father was in bad health, and at the time of the birth of this child was an in-patient of the Bromley Sick Asylum, where he had been kept for three months; the disease which he suffered from was supposed by the wife to be "consumption." There was another child of the marriage, an older boy of about four years, who remained perfectly healthy. The mother appears to be in robust health.

The lesions of the disease are almost uniformly in the shape of very warty excrescences on a red infiltrated base, varying in size from that of a sixpenny-piece to that of a threepenny-piece. The eruption seems to have developed nearly simultaneously, no particular lesion being noted in advance of the others. At the present time the distribution is as follows: A patch from a quarter to half an inch in diameter on the inner side of the right foot, and a larger patch on the outer side of the same foot; on the front of the knee there is a patch about half an inch across, and on the inner side and above the same knee there are three small recent nodules close together. On the outer side of the left heel, on the back of this heel, and again on the inner side of the left foot, there are large, very warty, patches. On the right buttock, just below the fold of the nates, there is a small nodule, and on the middle of the back of the right thigh and on its outer side there are four more small patches. On the middle of the left calf there is a small patch the size of a threepenny-piece,

and another of the same size on the left buttock. On the fourth finger of the right hand, on the base of the thumb, and just above the wrist, there are large warty growths. On the point of the right elbow there is a patch the size of a shilling, and a small nodule on the skin over the biceps muscle. On the left wrist there is a patch the size of a sixpenny-piece, and two lesions the size of a threepenny-piece on the back of the left elbow. The face and scalp are quite free.

A section of the skin obtained from a patch on the inner side of the knee was exhibited and this showed much acanthosis, and the infiltration of the corium with plasma-cells accumulated round numerous giant cells, characteristic of tuberculosis cutis.

(2) A case of *Lichen plano-pilaris* in a woman, aged 29 years, who had first noticed spots on her skin three years ago (on her leg). She now had an eruption of mixed type, the flat papules of Lichen planus being freely interspersed with the follicular spines of Lichen pilaris. The front of the right leg was covered from the knee to the ankle with this mixed eruption, and in the middle of this part there was a linear streak of hypertrophic Lichen planus of warty type. There was a characteristic group of spines mixed up with flat lichen papules on the inner side of both knees. There were quite characteristic flat papules of Lichen planus on the back, the thighs, and arms; and there were lesions on the buccal mucosa. The case was confirmatory of the view long expounded by Dr. Pringle, that Lichen spinulosus in adults was very frequently in reality Lichen planus. There was no follicular disease outside the patches of Lichen planus.

(3) A case of *prurigo of Hebra* in a boy, aged 12 years, of English parentage. The history given by the father was to the effect that the child had from infancy suffered from an itchy eruption, which had been treated from time to time at St. Mary's Hospital, and he had been seen by the present exhibitor three years ago in this way, and a diagnosis of "chronic urticaria" had been recorded at that time. He had come again a few weeks ago, and the diagnosis now made was that of prurigo. The glands in the groin were so much enlarged as to be conspicuous as swellings the size of a pigeon's egg, and the glands in other parts, especially the neck, were similarly enlarged. The eruption was found chiefly on the extensor surfaces of the arms, forearms, thighs, and legs, and on the buttocks. The skin was harsh

and dry in between the papules, and the boy was in poor general health. No other children were similarly affected, and there was no history in either parent of any skin-disease.

(4) A case of *Granuloma annulare* (Radcliffe-Crocker), which will be reported fully in a later issue of this Journal, in a man, aged 40 years.

Dr. J. M. H. MacLeod showed a case of *Tuberculosis cutis following measles*. The patient was a delicate boy, aged 7 years, who had presented himself for treatment at the Victoria Hospital for Children a week previously suffering from various lesions of the skin, which on examination proved to be tubercular. These consisted of a small patch of Lupus vulgaris about the size of a threepenny-piece situated on the upper lip below the right nostril; an ulcerated tubercular lesion, which was oval in shape, and measured an inch and a half in length and one inch in breadth, and was situated on the dorsum of the left foot; a "scrofulous gumma" on the left leg on the lower and outer aspect of the calf; and an irregular ulcerated sore on a swollen, congested base on the right ear which was of doubtful nature, and suggested at first sight a suppurating chilblain, but was most probably tubercular also. About a year ago the boy had had measles, and previous to that the skin had been healthy with the exception that he had been a martyr to chilblains, and that at the time when the measles developed he was suffering from a chilblain on the right ear. Two months after the measles the patch of lupus appeared on the upper lip, the lesion on the dorsum of the foot developed, and the chilblain broke down and ulcerated; a month later the "scrofulous gumma" appeared. Though delicate the patient presented no other tubercular stigmata, and the family history so far as tuberculosis was concerned was negative. The case was of interest in connection with the various cases of multiple lupus following measles which have recently been reported, and was doubtless an example of the dissemination of tubercle bacilli by the blood-stream to the skin, from the softening and breaking down of some tubercular focus, probably an affected bronchial gland, as a result of the measles.

Dr. H. Radcliffe-Crocker showed (1) a case of *Pemphigus foliaceus* in an early stage, which had commenced with the appearances of

Dermatitis herpetiformis. The patient was a single woman, aged 37 years, a teacher by profession, with a history that in April, 1905, small blisters had appeared, for the first time, on the chest and between the shoulders. This process had been going on ever since, and had spread to other parts, such as the bottom of the back, the abdomen, and legs. The face was next affected, and last of all, the arms, the former for one month and the latter for three weeks. There was great irritation at first, but this had improved since the patient had been in bed. When the first notes were made, at University College Hospital on December 22nd last, the rash was distributed over the front and back of the body, the former presenting a few small areas of skin still unaffected, the latter was attacked *en nappe*. Scattered about the shoulders and arms were more or less circular areas, from two to three centimetres in diameter, which commenced as spots, gradually increasing in size peripherally, and accompanied by scaling. There were about a dozen of these patches about the right arm, but fewer on the left. The flexor aspect of the left forearm was practically free. Both thighs were also involved, especially the right. Here there were reddened areas formed by coalescence. There were a few patches below the knees. The upper part of the buttocks was mainly affected by coalescence of diseased areas. On the face the lesions chiefly occupied the central third of the forehead, the eyelids, the cheeks, and a few on the chin. The ears and neck were also affected. These areas did not begin as blisters, but as red spots, the skin flaking off at the slightest touch. In this situation the areas were more or less coalescent, gyrate, reddened, and scaly. The general health, on the whole, had been good. She had never had any severe illness, except a flooding fifteen years ago. Nor was the present disease preceded by any illness. It came on quite suddenly, without apparent cause, except that the patient about a year before had had a lot of mental worry. She had lived in a healthy place in the country, and had always had good food and been well clad. When first admitted the parts were very crusted. This improved considerably under treatment. For ten days there was no eruption of blisters, but then she had a bad outbreak on both arms, the blisters varying from a pea to a walnut in size; they were arranged in clusters. Both legs were also involved, and presented groups of small blisters, with here and

there one the size of a florin. The parts about the neck were rather reddened and inflammatory-looking. She again improved under treatment, but latterly the disease had got ahead again, extending its area, and showing more exfoliation, blisters appearing from time to time. Some of the bullæ had a tendency to be more or less abortive. There had been no albumen in the urine.

(2) A woman, aged 39 years, with *elephantiasis* of the lips. The condition had commenced three years previously, as a small pea-sized lump in the lower lip, and this had then spread all over the lip. It commenced when she was two months pregnant. When first seen there was marked infiltration and swelling of the lower lip, which was three quarters of an inch (about 2 centimetres) wide in parts. There was a similar but less marked involvement of the upper lip. The lips were somewhat smaller than during pregnancy. The tongue was furred and the bowels constipated. Under thiosinamin, injected at the angles of the lower lip, improvement ensued, with amelioration of the discomfort; but latterly the lower lip had gone back rather, although the patient was much more comfortable as regards talking and eating, which were before treatment greatly interfered with.

Dr. Stowers showed a case of *Lichen planus hypertrophicus* in a farm labourer aged 65 years. From the age of fifteen to thirty-five he is stated to have been subject to a multiple, dry, scaly eruption on extremities (probably *psoriasis*). No other member of the family had any skin-disorder. Upon the extensor surface of right forearm there were a few small patches of aggregated papules and two or three on the right wrist (Lichen planus). On the left leg, outer surface, corresponding with the upper and half middle thirds, he has now an irregular-shaped patch of heaped-up and dry papules of well-marked Lichen planus hypertrophicus about seven inches by three inches in size. A few scattered papules and small plaques are visible around but distinct from the margin of the large patch. On the right leg there are a few small plaques and several scattered papules. Itching has been very troublesome. The tongue is quite free, but on the buccal mucosa one or two small red points or papules are visible, but not well marked.

Dr. Henry Waldo showed a man, aged 56 years, a foreman at paper

mills (rag department). He fell off a height of four feet six inches and pitched on his left side in the rag-room ten years ago, since when the side has been at times painful and the colour of the skin has never been normal. The discolouration has gradually increased in extent and several elongated tumours have formed. Last Christmas the part was very sore and raw in two or three places. The patient feels well and has worked as usual. There is no specific history.

The infiltrated area on the back was thought by the majority of the members present to be *syphilitic*.

Dr. Whitfield showed a woman with an eruption which he took to be a rare form of *syphilide*.

The patient had a definite history of syphilis contracted thirteen years ago, and had been under Dr. Whitfield's care for some time off and on for late lesions in the mouth and some cutaneous gummata.

Two weeks ago she had returned with the present eruption, which had been present five weeks and had not altered greatly since first seen. There was present a large incomplete ring on the outer surface of the left thigh immediately above the knee. The ring was about two and a half inches in diameter, and the border was hard, rounded, quite free from scaliness, and of a lively red colour, while the portion of skin enclosed was slightly brownish. The whole eruption had the very strongest resemblance to Erythema gyratum, but its indolence and induration favoured the diagnosis of syphilis. Most members agreed with the diagnosis offered but admitted the difficulty.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

A meeting of this Society was held on Wednesday, January 24th, 1906, Dr. H. Waldo in the chair.

The following cases were exhibited:

Mr. G. W. Dawson showed—(1) a young man, aged 22 years, the subject of *chronic frost-bite*. The condition began four years ago after taking a drive of fourteen miles upon a very cold morning. An inflammatory reaction in the tips of both ears soon followed, and every year since that time he had had a relapse in cold weather. The

borders of the auricles showed that actual loss of substance had occurred, and here and there were adherent scabs. The patient had not suffered from chilblains since boyhood, and he was not subject to "dead fingers."

Mr. Campbell Williams remarked that frost-bite was frequently accompanied by other signs of true Raynaud's disease, and, moreover, the condition was very prone to relapse.

(2) A man, aged 24 years, with follicular papules of *Lichen planus*, most marked upon the lateral aspect of the right thigh. There were also some plane papules. The disease was of general distribution and had begun six months ago.

Dr. Alfred Eddowes exhibited *a case for diagnosis*. The patient was a young woman, aged 20 years, suffering from a well-marked papulo-squamous, circinate (cockade) eruption of several months' duration. Each lesion began with a scaly, raised, reddish papule, surmounted by a rather adherent crust, which could be removed without hæmorrhage. The colour of the crust, which was rather brittle but not greasy, was a dirty yellowish-white. On attaining the size of a sixpence the central portion healed, leaving a dull red, almost smooth surface, while the border continued to advance, and when the whole lesion became the size of a shilling faint but definite traces of included rings were visible, giving the appearance, at first sight, of tinea imbricata. There were many polycyclical figures to be seen. The eruption was symmetrical and was chiefly confined to the flexor aspects of the limbs. No fungus had been discovered microscopically. Sections of the skin showed a condition such as is found in seborrhœa, but not as in syphilides or tuberculosis. Syphilis had naturally been suspected, but of this there was no history or evidence beyond some swelling of the cervical glands. There was a scar, however, of old glandular suppuration, and also a strong family history of tuberculosis.

The exhibitor stated that he was by no means satisfied as to the diagnosis of this case, therefore he would excise a second portion of skin for examination. The narrow, raised, hard, and scaly ridge was far too pronounced for any known variety of pityriasis.

The case excited an unusual degree of interest. Among the diagnoses suggested by members were pityriasis rosea, an orbicular syphilide, a circinate form of Lichen planus, and an aberrant variety of psoriasis.

Mr. T. J. P. Hartigan showed (1) a case of *Acne varioliformis* in an aged man. With the exception of a few pustules in the scalp, the disease was more limited to the trunk, where the lesions were numerous, and extended down to the umbilicus in front and to the base of the sacrum behind. The resulting scars were of unequal size and many of them were much pigmented. Ten years ago he was admitted for the same complaint at the Blackfriars Hospital under Dr. Payne, when the disease was limited to the forehead and adjacent hairy scalp. It got rapidly well, the only treatment employed being the Ung. sulph. co. rubr. of the Hospital Pharmacopœia. He was subsequently admitted under Dr. Marshall for a similar condition of the nose and scalp, and again was cured by the same treatment.

The eruption was now rapidly disappearing, the same ointment being used. No internal medication was being, or ever had been, employed in his case.

(2) A case of *Koilonychia* in a barman with eczema of the hands. The patient had sought relief for sycosis vulgaris.

Dr. Graham Little exhibited (1) a case of *favus on the smooth skin* in a little East End girl who had no signs of the disease elsewhere, and was of English birth and parentage. When first seen the patch, which was of the size of a shilling and situated upon the front of the neck, had several well-formed scutula upon it, but at the time of the meeting these had been unfortunately rubbed off by the friction of the clothes, and the patch was visible merely as a red, scaly area. The fungus had been demonstrated and was unmistakably that of favus. It was impossible to account for the infection in any definite manner, except for the history that the child went to school and had noticed that "some of the children had sores on the face." The patch had been noted by the mother for about six weeks before being shown, and it was the only place upon the body.

The President remarked that he saw occasionally a few of these cases at Bristol, and he had come to the conclusion that when the disease affected the scalp it was practically incurable by any other means than the X-rays.

Dr. J. H. Stowers emphasised the extreme rarity of favus on other parts of the body than the scalp. He had found oleate of mercury of some service in the treatment.

(2) A *case for diagnosis*. The patient was a young girl aged 17 years, a cashier in a drapery establishment. She was a well-built,

sturdy young woman in apparently good general health, except that she suffered now and then from chilblains, probably due to some extent to her sedentary occupation. The affection for which she had come for treatment had appeared three weeks previously in the shape of a hard, raised, pinkish patch on the plantar surface of the left heel. It did not itch, but was hot and tender. The patch looked rather like a wheal, but there had been no change in it for at least a week. The swelling was solid, no fluid being obtained on deep puncture with a needle. The outline of the swelling was sinuous and irregular, and the whole patch was of the size of a half-crown, but not altogether circinate. At the margin of the raised portion there was a distinct halo of a vivid pink colour one sixteenth of an inch in width. There were no chilblains at the present time, and the sensations of which she now complained were totally different from those with which she was familiar when she had chilblains. The boots had been examined and no irregularity of the inside surface was present. The patch had subsided appreciably within the past week, and it was not so pronounced as before. There was no excessive hyperidrosis.

Dr. H. G. Adamson was kind enough to send the exhibitor a note of an obviously similar condition which he had observed several years ago in a young woman of the same age. Dr. Adamson has been further good enough to consent to the publication of the following notes of his case:

"Miss J—, aged 16 years (November 2nd, 1899). Patient is a stoutish, well-developed girl and looks much older than her stated age. She suffers from constipation and headaches and is a little anæmic. Her face flushes easily. There has been some amenorrhœa. Several aunts and uncles died of phthisis. No other history of consumption. Patient has a goitre of one year's standing. Physical signs *nil*.

"The eruption has been present for three weeks on the left foot, one week on the right foot. The posterior half of the left sole is occupied by a red patch having a wavy margin which passed upwards for a short distance on to the sides of the sole and heel. The patch is hot and tender, and the whole area appears slightly raised, having the appearance of a deep-seated blister in process of development or an enormous wheal. The redness fades on pressure, but the pressure

causes pain. Beyond the inner margin of the patch are smaller irregular rings of deeper red, only very slightly raised, with narrow white margins, and there are patches of erythema on the dorsal surfaces of the toes. The feet were not itchy, sweated freely, and were not subject to chilblains. The condition of the right foot is similar, but the patch over the heel is smaller.

"Scattered over the calves and shins are about half a dozen circular, pigmented areas, the size of a threepenny-bit, with scarred centres, suggesting, perhaps, previous Erythema induratum.

"Nov. 13th.—Condition much improved. Lesions fading. Over whole area of lesion are tiny beads of sweat.

"Nov. 20th.—Lesions quite disappeared."

It will probably be agreed that these two cases are of the same type, but the diagnosis in neither is very clear.

Some of the members were of the opinion that the condition in the case shown was due to chilblains; others, with whom the exhibitor was inclined to agree, that it was a case of Erythema keratodes, unusual in its asymmetry.

(3) A case of *Granuloma annulare* (Radcliffe-Crocker), in which this diagnosis was universally accepted, and which will be more fully described in a later issue of this Journal.

Dr. T. Manners-Smith showed a case of *Lichen planus hypertrophicus* in a man, aged 64 years. There was a large patch on the left leg and some smaller ones upon the arms. The disease was of five years' duration. No separate papules could be seen, and there were no lesions in the mouth.

Dr. Norman Meachen showed (for Dr. Walsh) a man aged 59 years, a waiter, with *tuberculosis of the buttock*. The disease was of three years' duration, and it had commenced shortly after an operation for anal fistula. A year previously he had had double pleurisy, but beyond this there was no history of consumption nor of syphilis. At the present time the patch was 5½ inches in diameter, involving the perineal aspect of the left gluteal fold and encroaching upon the anal margin. The patient had been given by Dr. Walsh two injections of tuberculin (O. R.). The first time ·001 c.c. was injected, with a negative result. After the injection of 2 mgrs. a sharp reaction super-

vened, the temperature rising quickly to 100° F. The lesion also became redder, and during the next few days more scaly.

Dr. Wilfrid Warde remarked upon the benefit often derived in such cases from the local application of Fowler's solution, as suggested by Dr. Samuel West.

Mr. George Pernet showed a case of *lymphangiectodes* (Lymphangioma circumscriptum) occurring in a young woman, aged 26 years. The disease had commenced at the age of five months, according to the patient's mother. When first seen a few years ago there were nine or ten groups of deep-seated vesicles occupying the right side of the chest from the neighbourhood of the posterior axillary fold downwards and forwards, but not reaching as far as the right nipple line. The lowest and largest group was situated on a deeper-seated mass (lymphangiectatic pachydermia [Rindfleisch]), and some hæmorrhage had occurred in the vesicle-like lesions. The aforesaid growth was what the mother had noticed in infancy. It could still be made out readily with the fingers and, to some extent, with the eye. On the whole the lesions were not nearly so apparent nor were the groups so numerous as when the exhibitor had first seen the patient. She was very fair in complexion and was in very good health. The only thing that troubled her was the formation of vesicles from time to time, which occasionally became hæmorrhagic and slightly crusted as a result of rupture. The other children in the family were quite healthy and none of them had suffered in a similar way. The majority of the cases hitherto described were of English nationality.

Dr. Meachen inquired if the neighbourhood of the axilla were not a favourite seat for this affection, and he referred to a similar case which he had exhibited before the Society five years ago in a young woman of the same age in whom the left axillary region was involved. In this case also some inconvenience was experienced by the patient when the vesicles became hæmorrhagic.

Dr. T. D. Savill showed (for Dr. Agnes Savill) a culture of the *micro-bacillus of seborrhœa,* taken *from a boy,* aged 6 years, who was first seen on November 16th, 1905, *with two patches of alopecia areata* over the occipital region, oval in shape, the skin over them being rough and covered with black dots. The characteristic hairs were found at the margins of the areas. Some of these were taken and stained with aniline-gentian-violet. The roots of all showed tiny bacilli in abundance. The specimen was forwarded to Dr. Sabouraud in Paris, who stated that they were the micro-bacilli of seborrhœa.

One hair from the centre of the patch was placed in a tube of peptone agar, the culture-medium recommended by Sabouraud, and incubated at 37° C. In four days a growth was visible. In fourteen days it assumed the form of a cone of brick-red colour, raised from the surface of the medium but not extending over it.

A slide with micro-bacilli obtained from the culture was also shown, together with one of the "coccus gris" for comparison. The latter is usually present on the hairs, and the fact that so pure a culture of the micro-bacillus was obtained in the present case is remarkably in favour of Sabouraud's view that alopecia areata is due to the micro-bacillus of seborrhœa, and therefore that alopecia areata is but an acute manifestation of seborrhœa.

Dr. E. Stainer showed a *case for diagnosis.* The patient was a married woman, aged 52 years, who presented several infiltrated patches upon the extensor surfaces of the arms and one patch upon the forehead. The lesions had appeared about three weeks previously. They were of the size of a half-crown, and they caused some irritation. She had taken no medicine, and there were no constitutional symptoms. No history of any specific trouble could be obtained. She had undergone an operation about a year ago for tuberculous disease of the shoulder.

The majority of the members considered that this case was of the nature of an exudative erythema.

CURRENT LITERATURE.

SEPTIC ERYTHEMA AND URETHRITIS. D. F. Saraceni. (*Clin. Dermosif.*, fas. 2, 1905.)

Three years before the appearance of the present affection the patient was in hospital with a pruriginous eruption, and at intervals since then he had had other, but less marked, eruptions on the eyebrows, trunk, and limbs. At the present time the skin was red, and presented small papules, and tended to desquamate. In certain regions circumscribed areas were covered with crusts and pustules; these were most marked on the genitals, forehead, thorax and abdomen. On the forearms, especially the flexor aspect, the skin was pityriasic and somewhat red. Burning and itching were felt in the affected areas. Though the skin on the eyebrows was affected, the hairs of the eyebrows were normal. On the upper lip there were crusts, through some of which hairs passed. The glans and prepuce were slightly swollen and tender. On the prepuce were adherent scales; on

raising these superficial erosions were left. There was a slight purulent discharge from the urethra; threads occurred in the first portion of urine passed. The glands in the groins, axillæ, and neck were enlarged.

The following treatment was adopted: The hair was cut, fresh linen supplied, and sublimate baths given. The pustules were opened and iodoform ointment applied. Endo-urethral injections of nitrate of silver and sulphate of zinc were used. The patient was discharged in eight days.

Cultures of Staphylococci pyogenes aureus and albus were obtained from the scales, pustules, and urethral discharge.

T. P. B.

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Pemphigus, A Case of Septic. G. Crary. (*Journ. of Cut. Dis.*, January, 1906, p. 14.)

Telangiectasis, Multiple, Recurring Epistaxis with. C. O. Hawthorne. (*Lancet*, January 13th, 1906, p. 90.)

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Ochronosis, A Case of, with a Note on the Relationship of Alkaptonuria. FRANK M. POPE. (*Lancet*, January 6th, 1906, p. 24.) (Skin of face and palms brown. Report of eleven cases.)

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From Rebman, Ltd., London, 1905. *Radiotherapy and its Application to Skin Diseases.* By J. Belot, translated by W. Deane Butcher. Price 17*s.* nett.

From W. B. Saunders and Co., Philadelphia and London, 1905. *Atlas and Epitome of Diseases of the Skin.* By Dr. Franz Mracek. Edited by Henry W. Stelwagon, M.D., Ph.D. Second Edition, revised and enlarged. Price 16*s.* nett.

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ON CASES OF HYDROA ÆSTIVALE OF MILD TYPE: THEIR RELATIONSHIP WITH HUTCHINSON'S "SUMMER PRURIGO" AND WITH "HYDROA VACCINIFORME" OF BAZIN.

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In 1879 Hutchinson described under the name of "summer prurigo" a series of cases characterised by a papular eruption upon the face and upper extremities, recurring in summer weather and subsiding in winter, and in 1888 and subsequently, other cases, also of summer outburst, but with much more severe lesions of vesicular and bullous type. The more severe cases have since been identified with Bazin's "hydroa vacciniforme" described thirty years earlier, and the terms "Hutchinson's summer eruption" and "Hydroa vacciniforme of Bazin" are now often used synonymously, while the milder form of summer eruption is generally regarded as a distinct affection.

The object of this paper is to study a group of cases of recurrent summer eruption, usually of a mild type, but differing from the prurigo-like cases of Hutchinson in that the lesions tend to vesicate and, in some instances, even to approach Hutchinson's vesico-bullous type, the Hydroa vacciniforme of Bazin. Before proceeding to discuss them it will be convenient to recapitulate briefly the history and the

chief features of the severe type and of the "prurigo" form of Hutchinson.

Hydroa vacciniforme (Bazin); Eruptio æstivalis bullosa of Hutchinson (Berliner); Hydroa æstivale (Brooke).

In 1855 and 1862 Bazin gave a vivid, and now classical, description of this affection, which he termed "Hydroa vacciniforme"; but for nearly thirty years afterwards the disease remained unrecognised. In 1888 Hutchinson published a case which he regarded as a severe example of an eruption which he had described in 1879 under the name of "summer prurigo," and he noted that Jamieson had recently exhibited two very similar cases as unusual forms of Xeroderma pigmentosum. In 1899 Handford published in the *Illustrated Medical News* a water-colour drawing of a case of a boy with a vesico-bullous scar-leaving eruption occurring on the face and hands after exposure to the sun, and he identified this case and the cases of Hutchinson and of Jamieson with Bazin's Hydroa vacciniforme. In the years following Handford's identification of Bazin's affection many fresh examples were brought forward. Berliner recorded a case in 1890, and suggested a division of "Hutchinson's summer eruption" into two groups: (1) Eruptio æstivalis pruriginosa, corresponding to Hutchinson's "summer prurigo"; (2) Eruptio æstivalis bullosa, to include the severe bullous type of Hutchinson and Bazin's Hydroa vacciniforme.

Buri, in 1891, published another case. In 1892 Brooke reviewed the subject in the *British Journal of Dermatology*, and suggested the name "Hydroa æstivalis," "not simply as a compromise, but as most truly expressing the nature and cause of this very distinctive eruption." Then followed cases by Broes van Dort, 1892 (Hutchinson's "Eruptio æstivalis bullosa"); by Crocker, 1893 (who adopted Brooke's title, calling the affection "Hydroa vacciniforme seu æstivale"); by Brocq, 1894; by Granier, 1894; by Boeck, 1894; by J. Bowen, 1894 (with histology); by Jamieson, 1894; by Moreira, 1895; by Graham, 1895; by Jarisch, 1896; by Mibelli, 1897 (with histology); by Rasch, 1898; by McCall Anderson, 1898; and by Ledermann, 1899. In 1900 Magnus Möller published an important work upon the influence of light upon the skin, and collected all the previously published cases of Hydroa vacciniforme, adding two cases of his own to the list. He

showed by experiment that the exciting agents of the eruption in persons predisposed were the ultra-violet rays of the spectrum. Monographs, based chiefly upon the work of Möller, have since been published by Jakob Bong (1902) and by Etsujiro Jkeda (1904). Jkeda collected forty-four cases, and added one of his own, and Bong also reported a new case. Hutchinson has also from time to time reported other examples in his *Archives*. At the second International Congress of Dermatology in 1892 he showed portraits of several cases.

The affection described by these authors is characterised by a vesicular or bullous eruption appearing chiefly upon the face and hands, although not always limited to these parts, and occurring after exposure to bright sunlight, or, as some report, to strong winds. The eruption generally makes its first appearance in early childhood, and recurs every summer, subsiding during the winter months. As a rule the attacks generally cease soon after puberty, leaving the affected parts permanently damaged by scarring. The lesions are variously described as appearing at first as erythemato-papules, as papulo-vesicles or as œdematous papules which eventually become vesicular, or directly as vesicles. They quickly enlarge as vesicles until they reach the size of a split-pea or of a small coin. They then crust, the crust usually beginning to form in the centre of the lesion, making it umbilicated like a vaccination lesion. The crust rapidly spreads through the rest of the lesion forming a dark, often depressed, scab. Sometimes the lesions appear dark in colour from hæmorrhage. On the fall of the scab there is left an ulceration more or less deep, which heals with a vacciniform scar. The ears especially and the alæ of the nose are sometimes partially destroyed and the fingers contracted by scarring. The outbreak of the lesion may be preceded by malaise and may be accompanied by pain and itching. Either sex may be attacked, although it was at first supposed that boys were more liable.

The pathology of this affection is clear up to a certain point. Several observers have studied the histology of the lesions, and we may conclude from their descriptions that the process is that of an acute exudation of serum and of leucocytes accompanied by marked dilatation of the vessels of the corium and by formation of a vesicle in the epidermis by mechanical separation of the rete cells. If the process continues, necrosis of the epidermis and of the papillary layer

results from the stasis. It is known that these lesions are brought about in certain predisposed persons by the action of the sun's rays; and although we do not understand what the condition is which leads to this susceptibility, and we cannot explain how this influence acts, whether upon the cells themselves, or upon the vessels, or upon the nerves, or in what manner, yet, as Buri has remarked, it is of very great interest to know that so considerable a pathological process, which may lead even to gangrene of the skin, may be brought about by the action of light.

As to whether the light rays are the only exciting agents of the eruption in these cases there may be some uncertainty of opinion, for its occurrence during winter, or on dull days, or as the result of exposure to strong winds, is reported in several instances.

Hutchinson's "Summer Prurigo."

In contrast with these severe bullous scar-leaving eruptions are the milder forms of recurrent summer eruption described by Hutchinson as "summer prurigo."

Hutchinson's well-known paper was published in his *Lectures on Rare Diseases of the Skin*, in 1899. He there relates several examples of an affection of which he says the prominent features consist in its tendency to relapse, or to continue with but slight intermissions over many years and in spite of all treatment, to affect by preference the face and upper extremities, to be worse in summer weather, and to commence about the age of puberty. The eruption is more or less pruriginous, but by no means intensely so, and it consists of small red papules which look as though they were about to form pustules, but which never do so—*i. e.* they are abortive pustules. There is no ulceration or crusting unless from scratching, but in spite of this minute scars are constantly produced. The first example he gives is that of Charles Penman, in whom the eruption was almost universal, and he notes that this case differs somewhat from his statements as regards the general facts of the malady, in that it began considerably earlier in life and affected a greater extent of surface. Briefly the case of Charles Penman was as follows: The eruption dated almost from infancy. When first under observation at the age of thirteen years, he was covered from head to foot with the spots except on the palms and

soles. The lesions were scattered and not in groups. They formed conical elevations of a light red tint, and in the centre of some of them were minute accumulations of fluid. Most might be described as abortive pustules. The skin was marked all over with very shallow white cicatrices. The eruption was especially copious upon the cheeks, the forehead, and the back of the neck. It itched only at night. It usually got well in the winter. Several years later the lad had grown well and seemed in good health. The eruption was then present only upon the backs of the arms, slightly on the forehead, and over the buttocks. The skin was everywhere spotted with small cicatrices, so that a marbled appearance was produced. The attacks quite disappeared before the age of twenty-three years. Two other cases, Harriet S—, and Sarah S—, are related with similar eruptions beginning in childhood and recurring each summer. In one the itching was more pronounced than in Penman. He also briefly notes several other cases, chiefly in adults, of pruriginous recurrent eruption. In a note in a subsequent paper he says that all the more characteristic cases began in young children, but he has, however, noted a liability to a pruriginous form of erythematous acne occurring in summer and evoked apparently by exposure to sun, beginning in adults who had not suffered in infancy. Hutchinson says that he called the cases "prurigo" because from their long duration or resistance to treatment, as well as the character of their eruption, and the fact of beginning in infancy, they bore a certain resemblance to Hebra's prurigo, but that it would be better perhaps to call them simply recurring summer eruptions.

Such cases as Hutchinson describes are probably not of rare occurrence, although, possibly on account of their comparative mildness, they have received less attention than the more severe type of Bazin.

Cases of recurrent summer eruption have, however, been reported by Dr. Colcott Fox and by Dr. Radcliffe-Crocker which differ only from Hutchinson's cases in that the lesions tend to be papulo-vesicular and vesicular. No hard-and-fast line can be drawn between them and Hutchinson's cases, for in the "prurigo" forms, although there may be no obvious vesicles, it is often possible, by means of a lens, to find vesicular summits to many of the papules, while the vesicular cases generally present also purely papular lesions.

The aim of the writer is to recall these cases of Dr. Fox and Dr. Crocker, and to endeavour to demonstrate that they form a series connecting the papular cases of Hutchinson with the more advanced type of Hydroa vacciniforme of Bazin. The three following personal cases may be regarded as examples of the Hutchinson type; by comparison with other cases to be presently described, and with the cases of Dr. Crocker and Dr. Fox, it will be seen that they differ from these only in the slightly less advanced condition of their lesions.

Personal Cases of Hutchinson's Summer Prurigo.

Case 1.—George B—, aged 5½ years. June, 1905. The eruption appeared early in June. It occupies the face, trunk, and limbs, and is particularly profuse upon the forehead, the neck, the forearms, and the backs of the hands. It consists of minute pale papules, for the most part discrete and scattered, but here and there in groups and lines of three or four elements. There is no urticarial element, but the earlier papules have a faint erythematous halo. Many are excoriated and scabbed. The eruption is very itchy at night. The boy is thin, and the hands are cold. He had a similar eruption last summer, but was free during the winter.

Case 2.—Gladys M—, aged 11 years. August, 1904. The eruption has been present for three months. It has occurred every summer for some years past. On the face and limbs especially, but also upon the trunk, is an itchy eruption of small scattered papules.

Case 3.—Gladys R—, aged 12 years. July, 1905. On the face, hands, forearms, and lower legs is an eruption of pin-head-sized papules. On the face the papules are closely set, forming an almost continuous sheet, and the scratched, excoriated, and scabbed areas give it almost the appearance of an eczema. There was a similar eruption last two summers. The child has been in the park a great deal during the summer. She lives in an orphan school and is better there, but the eruption always appears when she comes home and plays out of doors.

Dr. Radcliffe-Crocker's Cases of Dermatitis recurrens æstivalis.

Dr. Radcliffe-Crocker has described in a paper in the *British Journal of Dermatology* cases of summer eruption, some with prurigo-like lesions and some with small vesicular lesions. Dr. Crocker points out that his cases differed only very slightly from the case of Penman (summer prurigo) described by Hutchinson. In his work on *Diseases of the Skin*, third edition, p. 303, Dr. Crocker places these cases apart from Hydroa vacciniforme, seu æstivale under the heading of Dermatitis recurrens (A) æstivalis (B) hiemalis, and he says that although etiologically allied to Hydroa æstivale they are morphologically different. He says also that the limitation of the eruption to the exposed areas is less absolute,

and the subsequent scarring is very slight in comparison, while itching is more marked, that the eruption is more variable in its characters, and vesiculation, if present, is on a much smaller scale, a pin's head to a hemp seed being the usual range.

I shall not quote any of the cases of Dr. Crocker, as they may be readily referred to in the paper mentioned above, but I would note that in two cases (2 and 3) "the vesiculation was rather more pronounced." In Case 2 there were "shallow pits on the cheeks from former lesions." In Case 5 "the ears were thickened and slowly hardening in the upper portion, which he attributed to his having broken the cartilage by violent rubbing even in his sleep." In Case 10 "the rim and lobes of the ears were also excoriated, and they have, as a whole, a bluish look, as if scarred superficially . . . on the right index finger was a large blister."

Dr. Colcott Fox's Cases of Hydroa æstivale of Mild Type.

These cases have been shown from time to time at the meetings of the Dermatological Society of London, and although they have already been reported in this journal it will be convenient to bring them together here, with Dr. Fox's comments made on the occasion of their demonstration.

British Journal of Dermatology, vol. vi, 1894, p. 236:

Dr. Colcott Fox brought a case of *Hydroa æstivale* (?), a lad, Henry W—, aged 17 years, with a papular inflammatory eruption thickly disseminated over the face, ears, and adjoining portions of the neck, and to a much less degree on the backs of the hands and forearms. The papules were raised, of a fresh colour, lens-shaped, and about the size of a prurigo papule. A few showed a tendency to vesicate, but the frequency of vesication varied in different attacks. There was some itching present. The ears were slightly seared or scarred. The lad said that he had suffered from the affection for the past ten years. It never quite disappears, winter or summer, but with the advent of strong sunlight the eruption immediately becomes intensified. The exhibitor brought forward the case as probably an example of *slight* Hydroa æstivale. He thought it likely that such slight cases could be connected through a series of others with the very formidable vacciniforme and bullous ulcerating examples recorded by Mr. Hutchinson and others.

British Journal of Dermatology, vol. ix, 1897, p. 476:

Dr. Colcott Fox presented a *girl*, aged 9 years, apparently in excellent health, with the exception of an eruption localised to the face, ears, and upper part of the neck. These regions were covered thickly with small but distinct scars, as if the child had suffered from variola. Amongst these superficial scars were a few deeper ones due to varicella. A few itching, soft, inflammatory papulo-vesicles, the size of a mustard-seed, were scattered about these regions. When first seen during the summer months there were more numerous clear vesicles, like the early lesions of some forms of Impetigo contagiosa. The history obtained was that the child had been subject to this eruption from birth, and that the eruption always began to get worse in spring, and was at its worst in summer. The hands were also in

the summer slightly affected. The exhibitor suggested the diagnosis of *Hydroa æstivale*, which was generally accepted.

British Journal of Dermatology, vol. x, p. 409, 1898:

Dr. Colcott Fox exhibited a boy (E. W——), aged 14 years, suffering from *Hydroa æstivale*. The portraits and records published of this affection have almost entirely been concerned with severe cases. The present case was of a type with which the exhibitor was familiar, and which he had already demonstrated to the Society. The boy's face, ears, and to a less extent the backs of the hands and forearms, were the seat of copious, discrete, inflammatory lesions about the size of hemp-seeds, and looking at a distance something like prurigo papules. On close examination with a glass many of the lesions were seen to be surmounted by clear vesicles. Moreover, the surfaces attacked were studded with minute scars, and it was notable that such an innocent-looking eruption should leave pits. In other cases the eruption had recurred each summer, but this boy had only been attacked with the onset of the present hot summer. He left the West London Schools twelve months ago, and had since been a van-boy. The itching was not very marked. Dr. Fox said he based his diagnosis on (1) the papulo-vesicular character of the eruption, (2) the scar formation, (3) its distribution, (4) its apparent excitation by sunlight. Such cases seemed to constitute the mildest forms of *Hydroa æstivale*.

British Journal of Dermatology, vol. ix, 1899, p. 464:

Dr. Colcott Fox presented a child (Rose B——), aged 6 years, suffering from a skin-eruption, which, he said, was somewhat difficult to classify. He had previously exhibited cases as probable examples of a mild type of Hydroa æstivale, and the striking resemblance of the present case to that shown earlier in the afternoon by Dr. Radcliffe-Crocker would be apparent to all. (This case is reported at p. 463 of the same number of the Journal and again in Dr. Crocker's paper in vol. xi, p. 46.) Dr. Fox made the following remarks: "About the beginning of June, 1899, the present eruption suddenly evolved for the first time over the face, neck, arms, legs, and to some extent over the trunk. The mother says it was intensely 'itchy,' and consisted of 'watery and mattery heads,' very much as at present. I saw the child for the first time on July 15th, 1899, and noted the presence of the eruption over the face (cheeks, chin, and forehead), the ear lobes, the neck, the forearms, and above the elbow and down over the fingers (the palmar aspects were free), the trunk slightly, and mostly on the back, and especially the small of the back, the buttocks, and in diminishing quantity down the legs, which are involved to a less extent than the arms, but, like the latter, mostly on the extensor aspects.

"The eruption was noted to be intensely itchy, as was, indeed, very evident from the signs of rupture of the lesions by the nails. It consisted of papules and pustules, about the size of hemp-seeds or prurigo-papules, distributed discretely and copiously, and without noticeable clustering. They were mostly excoriated by scratching, and, where crowded, crusted patches were formed, simulating pustular eczema. From the outset, however, I felt sure the eruption was not eczema.

"The child continued to be severely affected all through the rest of the summer and autumn, and fresh lesions were constantly evolving. When the results of

scratching and secondary pus-infection were mitigated the primary eruption was seen to be sometimes a prurigo-like papule and very frequently an impetigo-like clear vesicle, which enlarged somewhat, whilst the contents became rapidly purulent. Most of these pustules had a decidedly solid base. . . . There is no marked scarring.

"I have provisionally included these cases with Hydroa æstivale, and was disposed to regard them as one of a series of eruptions meriting that name. It may, however, be a type of eruption distinct from the vacciniform hydroa. All these cases seem to be distinctly affected by sunlight, though it will be noticed that covered parts may be involved."

This patient has since been under the writer's care at the Paddington Green Children's Hospital. When first seen, on April 23rd, 1904, the following note was made: "The whole face is swollen and the seat of a papulo-vesicular eczema, weeping and crusted in parts." It was afterwards found that the eruption had broken out each summer for several years past, and on the trunk, forehead, and ears were hemp-seed to pea-sized excoriated papules. The forearms and backs of the hands *were covered with fine white glistening scars*. The case was then recognised as one of Dr. Fox's cases of Hydroa æstivale. This year (1905) the child had a similar attack, which lasted on and off throughout the summer.

The two following cases have recently been under the writer's care, and they illustrate very well the type of case described by Dr. Fox as Hydroa æstivale of mild type.

Case 4.—Kate M—, aged 9 years. October 8th, 1904. The eruption first appeared four years ago in the month of September soon after the child had returned from the seaside. The mother states that the rash was similar to the present one, and that it came out as clear watery blisters which itched very much. The rash was more widely distributed than now. The face was severely affected. The eruption went away during the winter. The child remained in London during the following summer. The eruption did not appear that year, but two years ago, also after a visit to the seaside, it came again as before. Last year the child did not leave London, and she had no eruption. This year the eruption began early in September, once more after returning from a stay in the country. It now occupies chiefly the forearms, particularly the lower part, and the backs of the hands, the lower part of the thighs, the legs, and upper surface of the feet. At first sight the eruption, except that there are also a fair number of lesions upon the face, suggests scabies, as there is severe itching, scratch marks, and impetiginous lesions. Closer inspection shows the eruption to be made up of—

(1) A few tiny clear vesicles, from a pin-head to a millet-seed in size. About half a dozen of these can be found on each limb. They evidently represent the initial lesion.

(2) Tiny amber scabs, evidently dried-up vesicles, which when removed leave an excoriated surface or a small pigmented patch.

(3) Many small, dusky, pigmented patches, representing old lesions.

(4) A few pea-sized, dusky, flat papules with excoriated and suppurating apex representing pus in infected scratched lesions.

(5) On the abdomen is some irregular pigmented brown mottling, which the mother says was left by former lesions.

On October 22nd a few fresh lesions were noted—large pin-head-sized vesicles with a narrow erythematous halo.

By Christmas the patient was practically free from eruption, but on December 31st she returned with a new outburst; she had been playing out of doors during the Christmas holidays. On each of the arms and legs there were six to a dozen millet-seed-sized papules, reddish-brown in colour, some with a tiny vesicle at the summit. Many of the papules became excoriated with scratching, others turned brown, formed a dry crust, and exfoliated. The eruption again disappeared, and a few fresh lesions came in May of this year.

Case 5.—Grace L—, aged 7½ years. The patient was seen for the first time in May of this year (1905). The history was that she had had chicken-pox in June, 1904, with which illness she was in bed for sixteen days. There were many other cases in the school at the time, and the patient has several pit-like scars which look like those of severe chicken-pox lesions. The patient recovered, and some weeks afterwards an eruption like that now present appeared. It went away in the winter and in the beginning of May appeared again. The eruption, which occupies chiefly the arms and backs of the hands, is made up of (1) numerous scattered colourless papules felt in the skin like prurigo papules, (2) small papules with vesicular summit, (3) dusky, coloured larger papules with excoriated and suppurating apices (scratched infected lesions). The eruption does not itch very much. In June there were many "scabs" on face like those of impetigo. In September the child had been in the country, and the rash had worried her the whole time and had itched much. There is now eruption on the face, the cheeks, and the forehead—pin-head-sized papules, some with scratched tops and some excoriated and scabbed over an area of $\frac{1}{8}$ in. diameter.

It is noted that the arms from the deltoid insertion to and including the backs of the hands is studded with minute papules, some recent, some scratched. On the backs of the hands are circular, raised, disc-like areas of purplish colour, which are evidently the remains of the infiltrated bases of old pus-infected lesions. The whole of the forearm is covered with very fine glistening superficial scars. On the loins and back are minute scratched papules. There is nowhere any evidence of urticarial element. The mother has noticed that the eruption is always worse after the child has been playing out of doors, so that she has taught her to knit and sit indoors.

The five cases here reported may be fairly taken as representative of the various types of milder recurrent summer eruptions described by Hutchinson, by Colcott Fox, and by Radcliffe-Crocker. They bear so many features in common that it seems reasonable to group them all together; their chief characters may be summed up as follows:

(1) First appearance of eruption during childhood.

(2) Recurrence of eruption in the early spring and its continuance during the summer months.

(3) Its subsidence during the winter months, the attacks ceasing altogether or becoming less marked.

(4) The relationship of the eruption to exposure to sunlight—less marked perhaps in some instances than in others, possibly owing to imperfect observation.

(5) The distribution of the lesions chiefly upon the exposed parts or upon parts where the clothing is thin.

(6) The character of the lesions—papules, papulo-vesicles, and vesicles, often resulting in more or less well-marked scars.

(7) Tendency to itching of the eruption generally present, but more in some cases than in others.

The Relationship of the milder Cases of Summer Eruption with Bazin's Hydroa vacciniforme.

If the characters of the more severe bullous cases are now examined, it will be seen that they correspond in all particulars with these milder cases except as regards the severity of the lesions. It will be found, however, that in very many instances it is noted that the early lesions, or that lesions on some parts of the body, in the severe cases, were also papular or papulo-vesicular, exactly resembling those seen in the milder cases. For example, Jamieson states that in one of his cases the eruption on the forearms and forehead consisted of discrete papules. In Moreira's first case the lesions were vesicular and flat blebs, but the primary lesions, he says, were pin-point to split-pea-sized papules; in his second case the eruption appeared as discrete papules which became vesicles and bullæ from a pin's head to a split pea in size. In Eddowes' case the lesions began as papules. In Bowen's case the lesions at first consisted of small red papules and vesicles. In Jarisch's case on the hands there only developed pea-sized to bean-sized red- to bluish-red papules, which again disappeared after a few weeks, leaving no trace, or they developed into blisters which crusted and left scars. In later years the affection was milder and generally only superficial papules. Many other instances might be cited.

The following case, which was under the writer's observation during last summer, seems to point very distinctly to a close relationship between these different forms of summer eruption. In this instance the lesions were of "mild type," and the case exactly corresponded

to Dr. Colcott Fox's examples of Hydroa æstivale of mild form; later, however, there were developed large bullous lesions, which, although they did not leave scars, yet they certainly brought the case into a line with some of the examples of Hydroa vacciniforme that have been reported.

Case 6.—Florence P—. May 13th, 1905. Aged 11 years 8 months. Except for the eruption, the patient was apparently in good health. Both in her general appearance and in the character of her eruption she bore a striking resemblance to the girl Rosie B—, at that time attending the hospital, and previously under the care of Dr. Colcott Fox, and described by him in the *British Journal of Dermatology*, vol. xi, p. 464, as an example of Hydroa æstivale of mild type. The mother stated that the eruption had first appeared in the early summer four years ago, that it had returned each summer since, and that it had completely disappeared each winter. It was now present upon the face, over the shoulders and upper part of the back and chest, on the arms, and sparsely upon the legs. It consisted of pin-head to millet-seed-sized papules of a pale reddish-yellow colour, felt as little hard lumps in the skin; a few of the lesions had tiny vesicles at their summit, and there were also a few pin-head-sized vesicles. These lesions were thickly distributed over the areas mentioned, but without any tendency to grouping. The eruption itched considerably, and many of the papules were excoriated. The mother stated that in the previous years the eruption had been similar, but less extensive, and never any "blisters," only the small "itchy pimples." The eruption had always made its first appearance in May and had begun to disappear in the autumn. She had not herself noticed any direct relation to exposure to the sun. The remains of the lesions of previous years were seen as numerous whitish, circular scars of about $\frac{1}{16}$–$\frac{1}{8}$ inch in diameter, not depressed, and only noticeable on account of a smoothness and absence of pigment. These scars were chiefly seen upon the arms.

On July 1st there were a dozen or so fresh vesicles over the wrists and hands and backs of the fingers. Two or three of these were almost as large as a split pea.

On August 28th the eruption was still more severe. Upon the arms, the forearms, and the hands were large vesicular lesions, some as much as a quarter of an inch in diameter. There were twenty to thirty in all. They were tense and rounded, at first clear but afterwards becoming opaque. Some of the lesions were beginning to scab at the centre and have a dark erythematous halo around, so that with the central scab, the vesicular ring, and the dark halo they suggest the lesions of Erythema iris.

The patient was admitted to the hospital for observation, and on September 2nd it was noted that the larger lesions were disappearing: the vesico-pustule scabbed in the centre leaving a vesicular ring to which the scab ultimately spread and then fell, leaving a smooth, flat, purplish infiltrated area which eventually cleared up and was replaced by a very fine, smooth, whitish scar. On September 8th, the patient having been in bed, all the lesions had subsided and the face and arms were quite clear, except for some purplish patches still over the arms. *It was then decided to test the effect of exposure to sunlight*, and the patient was placed on the balcony in the strong sunlight during one afternoon. On the next day the nose, the forehead near the eyebrows, the cheeks, and the ears were the seat of

tense clear bullæ as large as marbles. There were two or three on the nose, three on the forehead, and one or two on each cheek; those on the ears were smaller, split-pea-sized, vesicles. In the course of the next two days the bullæ dried into clear amber crusts, so that the appearance was exactly that of an impetigo contagiosa; in a few days they fell off, and a week afterwards there was no trace beyond a slight pigmentation. At the end of October the patient had had no further eruption.

The presence of bullous lesions in this case, the direct result of exposure to bright sunlight, certainly carries us one step nearer to the severe vacciniforme type of Bazin. The fact that these particular lesions did not leave scars cannot reasonably be used as an argument against this view. The absence or the presence of scarring in greater or less degree may depend upon a difference in the vulnerability of the tissues, and perhaps of the intensity of the sunlight. In many of the severe cases reported it is noted that the lesions did not always leave scars. In one of Graham's cases "very superficial scars" were found, and in the other there was no scarring left by the lesions. In Broes van Dort's patient "the scars were scarcely visible, smooth, white, and not at all numerous; no resemblance to pock-marks." Jamieson says that the lesions did not always leave scars. In M'Call Anderson's two very severe cases, resulting in deformity of the nose, ears, and hands, it is noted that some of the lesions dried up without scars, leaving only faint pigmentation.

Unna's cases of Hydroa puerorum perhaps find a place here as examples of a modified type of Hydroa æstivale in which the lesions were of summer eruption, and consisted of vesicles and bullæ which did not leave scars.

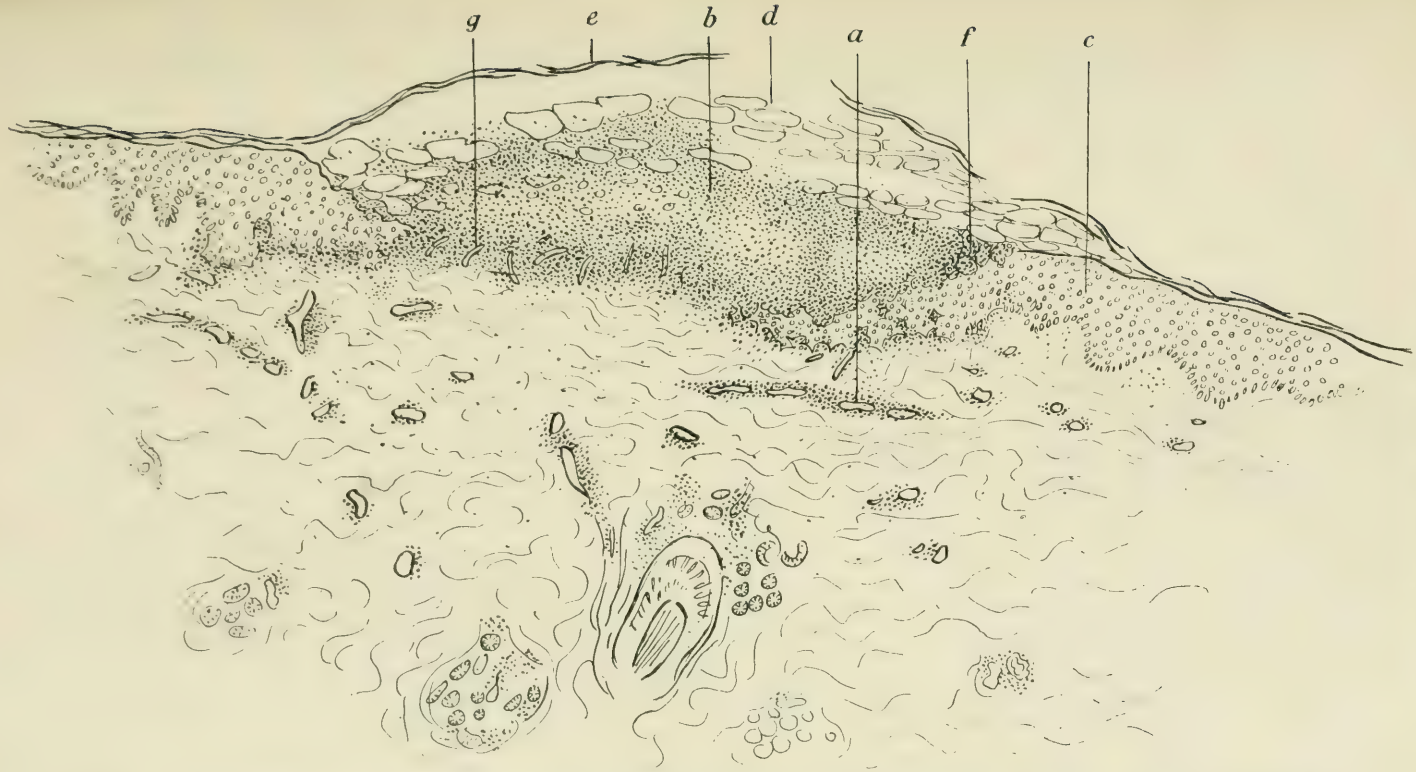
Histological Examination of a Lesion from a Case of Mild Type of Hydroa æstivale.

From Case 6 a lesion was removed for microscopical examination. It is instructive to compare the results of this examination with those of Bowen, Mibelli, Möller, Eddowes, and Jdeka of lesions of the more severe Hydroa vacciniforme.

The lesion excised for examination was a small vesicle of about 3 mm. ($\frac{1}{8}$ inch) in diameter, which had developed within twenty-four hours after exposure to bright sunlight. It had appeared as a pin-head-sized papule which had rapidly become vesicular. The contents had

become slightly turbid. The piece of tissue was fixed in sublimate solution, hardened in alcohol, and cut in paraffin. It was stained by various methods. The following description is from a hæmatoxylin stained specimen.

Under a low power one sees that the vesicle occupies the whole thickness of the epidermis, being represented by a lens-shaped oval mass made up of coagulated blocks of serum above and of densely crowded nuclei below, and having as its roof the horny layer of the epidermis, while its floor is formed by the fibrous bundles of the corium. The vessels in the neighbourhood of the lesion are widely dilated and surrounded by masses of cells. The prickle-cell layer on either side of the lesion is much increased in thickness. On examining the margin of the lesion under a high power one finds that this thickening of the epidermis is due to extreme swelling of the bodies of the prickle-cells; there is apparently no multiplication of prickle-cells. The granular and the horny layers are normal; there is no evidence of parakeratosis. Beneath this part of the epidermis the vessels of the papillæ are much dilated and surrounded by small round cells (lymphocytes), and by polynuclear leucocytes. Passing towards the central part of the lesion, we find the exudation of serum and leucocytes making its way between the horny and the deeper layers of the epidermis, and tracing the prickle-cell layer onwards into the vesicle, we find that its elements at once become separated and broken into irregular islets, and that very soon all trace of prickle-cells is lost. Just at the angle of the vesicle, where the exudate is still forcing its way between the horny layers and the prickle-cell layers, flattened stretched prickle-cells pass across to form loculi, but these are rapidly lost towards the centre of the lesion. The mass of exudation forming the contents of the vesicle and thus separating and ultimately replacing the prickle-cells, consists at its upper part of large blocks of serum, and below of densely crowded polynuclear and small round cells. Except towards the margin of the vesicle, no trace of prickle-cells nor of connective-tissue cells or bundles remains. The papillary layer has disappeared except for a few strands of vessels. The vessels of the corium are everywhere below and around the lesion enormously dilated, the deeper vessels around the hair-follicles and sweat-glands, as well as the more superficial. They are surrounded by masses of cells, chiefly deeply staining rounded nuclei, with poly-



a. Dilated blood-vessels surrounded by masses of cells. *b*. Cellular exudation. *c*. Œdematous prickle-cell layer. *d*. Blocks of serous exudate. *e*. Horny layer lifted up to form the roof of the vesicle. *f*. Margin of vesicle where the exudation is forcing its way between the rete and the horny layer. At this point are seen (under high power) columns formed of flattened and stretched epithelial cells dividing the vesicle into loculi. *g*. Tissues of corium destroyed by exudate, but several dilated vessels remaining.

nuclear cells in smaller number. The fibrous bundles of this part of the corium appear tightly packed and swollen in comparison with those further from the lesion. With appropriate stains a few cocci were found in the most superficial part of the vesicle, just beneath its horn-cell roof, but no micro-organisms more deeply.

The main features of the lesions are :

(1) An enormous dilatation of the blood-vessels of the corium.

(2) Swelling (œdematous ?) of the connective-tissue bundles and of the prickle-cells.

(3) A serous and cellular exudation breaking through and destroying the prickle-cell layer of the epidermis, lifting the horny layer up to form a vesicle.

(4) The most superficial part of the papillary area of the corium is also destroyed and replaced by the exudation.

(5) There is no evidence of fixed-cell proliferation either of the epidermis or of the corium.

Résumé of Histological Examinations of Lesions of Hydroa vacciniforme for Comparison with the Foregoing.

Bowen examined a primary vesicle and also an advanced lesion. The histological appearances of the early lesion were those of a vesicle with some tendency to multilocular formation situated in the middle layers of the rete with a considerable round-cell infiltration in the corium, more especially about the blood-vessels. The advanced lesions showed a "necrosis" of the epidermis and of the adjacent parts of the corium with enlarged "necrotic" blood-vessels, often with a free hæmorrhage in their vicinity.

Mibelli examined many lesions in various stages, and from his observations he concluded that the process consists of a very severe leuco-sero-fibrinous inflammation of the whole thickness of the skin, which leads to the formation of intermalpighian vesicles by simple pressing asunder, and without previous degeneration or alteration of the prickle-cells. The inflammation is also characterised by an early and enormous dilatation and thrombosis of the superficial vessels, from which there often results a partial necrosis of the papillary layer.

Mibelli believes that possibly this vaso-dilatation, with the stasis which follows, represents the principal fact and the point of departure of the whole process. It is this distension of the vessel wall with blood which gives the bluish tint to the lesion.

Möller describes an intense leuco-serous inflammation leading to formation of a multilocular pressure-vesicle (*verdrangungs blase*). There soon arises a considerable dilatation of the superficial vessels, with formation of thrombosis and hæmorrhages, with consequent necrosis of the papillary layer or still deeper.

The necrotic alterations appear to be a consequence of mechanical, so to speak, hydraulic, disturbance in that through exudation, thrombosis, and extravasation the circulation comes to a standstill. Histologically the first condition appears to be the vessel dilatation, due to the influence of the chemical rays of light; although the manner by which the short-waved rays bring about this change, whether by alteration of the endothelium or of the vessel-nerves, we do not know.

Eddowes' section demonstrated that the process was an œdematous necrogenic inflammation, commencing high up in the cutis and involving the epidermis secondarily.

Jkeda describes the formation of a multilocular vesicle in the rete, arising from a mechanical separation of the prickle-cells in and around the vesicle: in the stratum Malpighii numerous leucocytes; in the corium loosening of the connective tissue, through serous exudation and dilatation of vessels, which are filled with normal blood-cells and surrounded by a thick mantle of leucocytes. No necrosis was found, but the lesion was quite young, though it was easy to understand how, with the further development of the lesion, rupture of the vessels, stasis, and necrosis could be brought about.

A comparison of the histological appearances found in the writer's Case 5 with the results of examination in cases of Hydroa vacciniforme will show that the picture in all is essentially that of an intense leuco-serous exudation, with dilatation of vessels and destruction of tissue in proportion to the stage of the process. The appearances differ only in accordance with the stage reached by the inflammatory process.

In conclusion, the writer is of opinion that all these recurrent summer eruptions, whether of the type of "summer prurigo" or that of the "mild forms of Hydroa æstivale," or of that of the severe class of "Hydroa vacciniforme" should be placed in one group and studied together. A better understanding of the milder types would also throw light upon the more severe. We know that the eruption itself may be caused by exposure to light, but there is some reason to think that other agents also may cause it, and this is a point which requires further study. The eruptions have no resemblance to the normal reactions of the skin to strong sunlight, viz. to Erythema solare and to browning or pigmentation, and it seems probable that they depend upon some abnormal general condition of which we are ignorant but which renders the tissues susceptible. The occurrence of hæmatoporphyrin in the urine of three, possibly four, of the reported cases may have some etiological significance, which has not, however, been worked out. In some respects the affection may be compared with

variola or with pellagra, which are general diseases, in which the skin eruption is modified or brought about by the action of light.

Without suggesting any close affinity between these summer eruptions and the eruptions of Lupus erythematosus and tuberculides, certain resemblances may be pointed out. The lesions of Lupus erythematosus are similar in their distribution, especially upon the exposed parts, the face, the ears, and the hands, they are notably influenced by exposure to weather, and they have the same tendency to leave scars. Increased vascularity and œdema of the tissue elements are marked features of their histology ; they are amicrobic. In this connection a case of Lupus erythematosus with bullous lesions reported by Galloway may be recalled. As regards tuberculides, their distribution on the face and limbs, their resolution with scar formation are comparable to the behaviour of the papular lesions in summer eruptions. It is possible that many so-called winter eruptions, which have been regarded as related to summer eruptions, are actually tuberculides.

These comparisons are made without necessarily supposing any etiological relationship between these affections, but merely as a suggestion that in summer eruptions we have possibly also to do with some form of toxæmia with lesions in the skin of an inflammatory but amicrobic nature determined by local causes, in this instance notably by exposure to ultra-violet rays but possibly by other agents also.

Hydroa Vacciniforme, seu Æstivale.

(1) Bazin.—*Cours de Semiotique Cutanée*, 1855. *Leçons Théoriques et Cliniques sur les Affections Cutanées de Nature Arthritique et Dartreuse*, 1ère édition. Paris, 1860. *Leçons Théoriques et Cliniques sur les Affections Génériques de la peau*. Paris, 1862. *Leçons Théoriques et Cliniques sur les Affections Cutanées de Nature Arthritique et Dartreuse*, 2me édition. Paris, 1868.

(2) J. Hutchinson.—"A Case of 'Summer Eruption' recurring with great Severity for many Years," etc., *Clin. Soc. Trans.*, xxii, 1888.

(3) Allan Jamieson.—"Two Cases of Xeroderma Pigmentosum," *Lancet*, August 18th, 1888. "Hydroa Vacciniforme," *Diseases of the Skin*, 3rd edition, p. 172. "Hydroa Vacciniforme, seu Æstivale," *Brit. Journ. Dermat.*, vol. vi, 1894, p. 292.

(4) Handford.—"Hydroa Vacciniforme," *Illustrated Medical News*, October, 1889.

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(18) Stephen Mackenzie.—Hydroa Æstivale; Case exhibited at the Third International Congress of Dermatology, London, 1896, *Transactions*, p. 924.

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(20) T. M'Call Anderson.—"Hydroa Æstivale in two Brothers, complicated with the Presence of Hæmatoporphyrin in the Urine," *Brit. Journ. Derm.*, vol. x, 1898, p. 1.

(21) *Rasch.—*Derm. Centralb.*, 1899, p. 144, Copenhagen. (Three cases, one case red urine.)

(22) Reichel.—"Demonstration eines falles von Sommer-eruption," *Verhandl. der Deutsch. Dermat. Gesellschaft*, Congress VI, 1899, p. 417.

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(28) Etsujiro Jkeda (Japan).—"Hydroa Vacciniforme" (Bazin), Inaugural Dissertation, Rostick, 1904.

(29) Hutchinson.—Second International Congress on Dermatology, Vienna, 1892. (Showed portraits of several cases.)

(30) Hutchinson.—*Archives*, vol. i, 1890, p. 231; *Ibid.*, vol. i, 1890, p. 235; *Ibid.*, vol. vi, 1895, p. 110; *Ibid.*, vol. viii, 1897, p. 108.

Plates and Illustrations of Hydroa Vacciniforme, seu Æstivale.

(31) Handford.—*Op. cit.*, coloured drawing.

(32) Bowen.—*Op. cit.*, photograph.

(33) Crocker.—*Atlas of Skin Diseases.*

(34) Hutchinson.—*Clin. Soc. Trans.*, 1889, vol. xxii, coloured drawing.

(35) Hutchinson.—*Archives*, vol. vi, 1895, plate cx; *Ibid*, vol. viii, 1897, plate cviii.

(36) McCall Anderson.—*Op. cit.*, photograph.

(37) M. Möller.—*Op. cit.*, photograph, fig. 8.

Summer Prurigo and other milder Forms of Recurrent Summer Eruption.

(38) Hutchinson.—*Lectures on Rare Diseases of the Skin*, 1879, p. 126.

(39) Hutchinson.—*Archives*, vol. ii, p. 106, 1891; *Ibid.*, vol. v, p. 277, 1894; *Ibid.*, vol. vi, p. 181, 1895.

(40) T. Colcott Fox.—"Case of Slight Hydroa Æstivale," *Brit. Journ. Derm.*, 1894, vol. vi, p. 236; "Hydroa Æstivale," *Ibid.*, 1897, vol. ix, p. 476: "Mildest Form of Hydroa Æstivale," *Ibid.*, 1898, vol. x, p. 409; "Mildest Type of Hydroa Æstivale," *Ibid.*, 1899, vol. xi, p. 464.

(41) Radcliffe-Crocker.—"A Clinical Study of some Winter and Summer Recurring Eruptions," *Ibid.*, February, 1900, vol. xii, p. 39; "Case of Recurrent Summer Eruption," *Ibid.*, 1899, vol. xi, p. 463.

(42) P. S. Abrahams.—Case of Prurigo Æstivale at the Third International Congress of Dermatology, 1896, *Transactions.*

(43) Reichel.—*Verhandl. der Deutsch. Dermat. Gesellschaft*, Sixth Congress, 1899, p. 417.

(44) Unna.—"On Duhring's Disease and a New Form of it," *Monats. f. prakt. Derm.*, 1889, vol. ix, p. 97.

The following papers have appeared since this article was written:

(45) A. Jordan.—"Bazin's Hydroa Vacciniforme vel Hutchinson's Summer Prurigo or Summer Eruption," *Monats. f. prakt. Derm.*, February 1st, 1906, p. 137.

(46) Constantin.—"Bullous Forms of Hydroa Vacciniforme," *Ann. de Derm. et de Syph.*, December, 1905, p. 927.

SOCIETY INTELLIGENCE.

THE DERMATOLOGICAL SOCIETY OF LONDON.

A MEETING of the above Society was held on Wednesday, March 14th, 1906, Dr. J. HERBERT STOWERS in the chair.

The following cases were exhibited:

Dr. COLCOTT FOX exhibited (1) a single woman, a domestic servant, aged 22 years, suffering from an eruption on the legs of two years' duration, which he diagnosed as a *tuberculide*. The lesions were papulo-nodules disseminated sparsely over the feet, especially about the ankles, on the sole of the right foot, and the front and sides of the legs. They varied in size from that of a split pea to half this size. Some, which were better felt than seen, showed as livid discolorations of the skin. Others were raised, somewhat conical, and some presented a crateriform necrosis of the central part. The lesions were indolent and appeared at irregular intervals. Above the left knee, on the inner side of the thigh, was a deep-seated larger nodule of uncertain nature. There was no indication of any syphilitic affection. The patient presented cyanotic extremities, but appeared to have sound organs. She had opacities on the corneæ, and gave a history of repeated "eye trouble" from the age of eight years. Lupus vulgaris had been present in the nostrils, and, after several curettings, had been cured by the X-rays. The exhibitor said he had not so far investigated the case further.

(2) A man with several groups, the size of the finger-nail, of plugged follicles with projecting short spines and no conspicuous inflammatory setting. These patches were distributed over the flexor aspects of the forearms. The buccal mucous membrane on the left side presented characteristic opaline papules, and hence the diagnosis of *Lichen* of Wilson was offered. A member of the Society also pointed out distinct indications of small plane papules on the flexor surface of the wrist. Dr. Fox said they were all acquainted with the occurrence of miliary follicular acuminate lesions, especially on the legs, in Wilson's lichen, and these tended to run into patches and become verrucose. When mixed with plane papules they might be in a minority or majority, but in his experience these rounded circumscribed groups were uncommon, and in this case, apart from the mouth lesions, the

diagnosis was uncertain. He was particularly interested in the case because some years ago he saw a patient with similar but larger patches, and Professor Neisser gave him a photograph labelled "chronic follicular eczema," which might have been taken from this case. A few days ago this patient returned with well-marked Lichen planus. Dr. G. H. Fox figured in his atlas similar groups on a woman's wrist, and called it Keratosis follicularis. The exhibitor also suggested the possibility of cases of this kind having been recorded under the term Acné cornée.

Dr. James Galloway showed a case of *persistent macular scaly erythrodermia* for diagnosis. The patient was a strongly-built and healthy man, aged 49 years. His occupation was a sedentary one, as he was employed in a London bank, but he was in the habit of taking sufficient exercise, and was in good muscular condition. A careful examination showed no visceral lesions, nor was there any history of previous disease having any bearing on the present state. The patient had suffered from occasional attacks of what he called eczema for the past seven years, but the condition had evidently been comparatively slight; the patches had disappeared from time to time, and little notice had been taken of them.

About the month of June, 1905, a more serious condition of inflammation of the skin attracted his attention. There began to make their appearance on the skin rounded inflamed patches, which, when once established, seemed to show no inclination to heal. He was first seen by Dr. Galloway in September in consultation with Mr. F. Stanley Hogg. He then presented numerous rounded or oval areas, varying in size up to about two inches in diameter, distributed without appearance of definite arrangement over the trunk and to a less extent on the extremities. On the front of the chest one or two of these rounded areas tended to become confluent. There were two patches of more definitely eczematous inflammation upon each groin, irritated to some extent by the truss he wears, and the scalp was severely affected. The patches never oozed; they were of a bright red colour, and showed some desquamation. There was no enlargement of lymphatic glands. A definite diagnosis was not given at the time. Palliative treatment was ordered, and the patient continued his occupation in the ordinary way.

In February, 1906, the patient was again sent to Dr. Galloway by Mr. Hogg, as the symptoms of skin-disease had increased, and on observing the condition of affairs Dr Galloway suggested that he should come to this meeting of the Society. The patches of dermatitis have increased in number. None of those seen at the commencement appear to have vanished, while several small ones are appearing. The patches on the front of the chest have coalesced, so that a considerable area of continuous dermatitis is now in this position. The scalp continued to be severely inflamed and scaly, and the patches on the groin were much in the same condition as when first seen. The patient continued to be in good health.

Dr. Galloway remarked that he had some difficulty in making a definite diagnosis of the case. When seen first, and again when seen a fortnight ago, the character of the affection, the slight degree of thickening of some of the lesions, the persistence of the patches and absence of the ordinary appearances of the varieties of seborrhœic dermatitis, suggested the possibility of the eruption being a prodromal eruption of Mycosis fungoides, and it was with this in view that he had arranged for the patient to come to this Society. For the past fortnight, however, the palliative treatment which had been recommended (by means of bran baths, the application of a paste containing zinc oxide and a small quantity of salicylic acid) had been carefully carried out with greater continuity, the result being a very considerable diminution in the degree of redness and apparently the disappearance of the suspicious thickening. He felt inclined, therefore, to hope that the more serious diagnosis could be eliminated. If this were so, the question arose as to which of the categories of chronic inflammatory conditions of the skin not definitely eczematous, and not of the character of a seborrhoic affection, the present state belonged. Dr. Galloway had in view some of the forms of eruption described by Dr. Crocker recently under the name of Xantho-erythrodermia perstans. The inflammation, however, seemed to be more acute, the yellowish colour was absent, and it could not be stated to have any distribution along segmental lines. On the other hand, it might readily be supposed that Dr. Brocq would be anxious to claim the case as an example of his third category of "parapsoriasis," the "érythrodermies pityriasiques en plaques disséminées." Dr. Galloway considered that a definite diagnosis was hardly possible owing to our want of knowledge of

the exact etiology of these cases. He presented the patient as an interesting example of the varieties of chronic persistent scaly affection of the skin of which Drs. Crocker, Fox, MacLeod, Brocq, J. C. and C. J. White had written.

The members of the Society present agreed with Dr. Galloway that in all probability the diagnosis of Mycosis fungoides might be excluded. The ill-defined characteristics of the peristent scaly eruptions referred to rendered a definite diagnosis difficult.

Mr. Gerald Sichel showed for Sir Cooper Perry a case of *Lupus erythematosus* in a young lady. The disease had a somewhat extensive distribution on the cheeks, nose, and both hands. It had began in two small red spots on the right cheek about three months ago. There was very little infiltration, and some of the smaller spots were markedly scaly. The patient suffered from indigestion. The general opinion of those present was that the case was one of Lupus erythematosus.

Mr. Gerald Sichel also showed the following: (1) A little girl, aged 6 years, suffering from *congenital tumours of the fingers*, under the care of Mr. F. J. Steward. She had previously been shown at a meeting of this Society last July, when it was recognised by Dr. Whitfield as being of the same nature as a series of cases reported in the *Medical-Chirurgical Transactions*, in 1873, by Dr. Murray, and again in 1903 by Dr. Robinson and himself under the title of "Remarkable Series of Cases of Molluscum Fibrosum in Children." The present case had decidedly improved since then under X-rays.

(2) A case for diagnosis in a little girl, aged nearly 4 years. There were hard, painless, somewhat reddish, pearly-looking tumours on the middle and ring fingers of the right hand, which began when she was eight months old.

Dr. Radcliffe-Crocker and others recognised this as a case of what the former and Mr. Campbell Williams had described under the name of Erythema elevatum diutinum in 1894. Other cases have been published by Middleton in 1887, and Judson Bury in 1889. Dr. Crocker's case involuted, and Dr. Pringle thought this case would probably do the same.

(3) An unmarried female, aged 24 years. She had had the rash since she was thirteen. It began as two little red spots on the left hand, which then "festered." She now had chronic red nodules on

back, shoulders, right breast, both arms and fore-arms, both thighs, and right leg. The glands in both groins were slightly enlarged and had been bigger; they were not tender but had been so.

The nodules on the extremities were mostly on the extensor surface. The itching was almost intolerable. She scratched them, and many of the spots were petechial, and a few suppurating. The tendency to keloid was seen in one of her vaccination scars. She had begun X-ray treatment of the arms on February 28th, and had had ten minutes' daily. The itching had been much improved where the rays had been applied. Sir Cooper Perry had considered it a case of "itching keloid" and had ordered X-rays.

Some members were inclined to think that the diagnosis of keloid was correct, others thought it a case of Urticaria perstans. A very unsatisfactory section of one of the nodules was exhibited, and it was suggested that much light might be thrown on the nature of the lesions if mast-cells were particularly looked for. Dermatitis artefacta was also considered, only to be dismissed.

(4) A case in a young woman, aged 22 years, of *Acne vulgaris*, which had been treated unsuccessfully with X-rays, but which had been practically cured by Dr. Eyre, using Wright's vaccine method. The acne had been pustular, but there had also been many black heads. Her opsonic index for *Staphylococcus aureus* was first ascertained on November 30th, 1905, and the first injection made on December 20th. In all, five vaccinations—four of mixed cultures of *Staphylococcus aureus* and *Staphylococcus albus* and one of pure *Staphylococcus aureus*—had been given, the last on March 5th last. Not only had pustulation entirely ceased, but nearly all the comedones had likewise disappeared, a fact which was commented upon as unusual.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

A MEETING of this Society was held on February 28th, 1906, Dr. H. WALDO, President, in the chair.

The following cases were exhibited:

Mr. G. W. DAWSON showed (1) a girl, aged 16 years, with *Lichen planus* affecting the legs. The condition was of two and a half years' duration, and the eruption, situated over the shins, was reticulated

something after the fashion of an Erythema ab igne. The lesions, most marked upon the left leg, consisted of flat, shiny, lilac-coloured concentric rings, showing pigmentation here and there. The patient had been exhibited before the Society previously (*Brit. Journ. of Derm.*, 1905, vol. xvii, p. 110), when the general opinion was that it was one of purpuric erythema. Microscopically, it was a typical Lichen planus.

A few of the members found it rather difficult to exclude Erythema ab igne, but the majority were inclined to agree with the view of the exhibitor.

(2) A case of *Dermatitis herpetiformis* in a young man, aged 25 years, of eight years' duration. The eruption, which was intensely pruritic, was of a recurrent character, almost entirely confined to the region of the back and the front of the axillæ. A microscopic examination of the early vesicles showed vesicles in the epidermis, with great infiltration of leucocytes into the surrounding cutis. At the present time there were several scabs upon the buttocks, which gave it somewhat an impetiginous appearance.

(3) A case of *tinea of the hand* in a man, aged 60 years, who had to do with horses and cattle. A fungating eruption was present on the dorsum of the right hand and some scanty mycelium had been found.

(4) For Dr. Manners-Smith, a case of *ulerythema* in a young woman, aged 29 years, in whom the disease had commenced two years ago upon the scalp. There were also two patches upon the back.

Dr. Alfred Eddowes showed (1) A case of *Actinomycosis* primarily and solely affecting the cheek. The patient was a man, aged 30 years, who presented himself a fortnight ago at hospital complaining of a lump in his cheek which had existed for six months and had latterly begun to discharge into his mouth. On inspection there was an obvious swelling at the left angle of the mouth sufficient to distort the features slightly. The skin over it as well as the vermilion of the lips was practically normal in appearance, but at the junction of the mucous membranes of the upper and lower lips was a nipple-like opening leading into a sinus which had existed for some few weeks and which exuded pus occasionally. The swelling, which was of the size of a haricot bean, was nearer the mucous surface of the mouth than the

skin, and digital pressure upon it caused an escape of pus, not only at the nipple-like orifice first noticed, but also from two separate sinuses opening inside the cheek. The feel of the tumour was as if it were composed of a ringed collection of small nodules and was breaking down in the centre. From the main growth a secondary offshoot, horizontally placed, could be detected passing to the tissues of the lower lip.

The patient was placed upon thirty-grain doses of potassium iodide, thrice daily. After three days two minute sinuses were seen discharging pus through the skin of the cheek, and some of this material, freshly expressed, was taken for examination. Microscopically it was found to be crowded with impurities, a fact which was easily explained when it was ascertained that all the external openings communicated with the oral cavity and, therefore, were liable to be contaminated with food *débris*, etc. A portion of skin was removed also for microscopic examination. Neither by probe nor curette were any yellow, seed-like bodies or granules obtained. *

The patient had been exhibited at the Polyclinic and also before the Odontological Society. On both occasions it was apparently agreed that the disease up to the present time had no connection with either maxilla or teeth. The points of interest in the case were that the patient was a commercial traveller, and had nothing to do with cattle, horses, or straw; that the disease commenced primarily in the cheek; that the clinical features, when once established, were so distinctive that a diagnosis could be made without a microscopic examination; and that the seed-like, yellow concretions are not necessarily formed in cases that have existed for such a short period as six months.

(2) A case of *sclerodermia* in a plumber, aged 50 years, who stated that twelve months ago, after an acute attack of gout, he noticed the skin hardening on many parts of his body. He now exhibited symmetrical patches on each side of the neck, over the clavicles down to the anterior borders of the axillæ, over the upper and outer sides of the forearms (egg-shaped patches), over both hips, involving a considerable portion of the adjacent integument of the abdomen as well as the buttocks, and also the outer aspects of the thighs and legs.

* Since the date of the meeting Dr. Eddowes has informed us that he has obtained sections containing the typical ray fungus, which he will show to the Society at its next meeting.

Dr. Graham Little showed a case of *acquired syphilis in a male infant* aged 13 months. The following history was obtained: The mother had "sores" upon the vulva in August of last year; a general red rash was noted in the following September. She has at the present time anal condylomata and mucous tubercles on the vulva, with chronic sore throat, but no eruption. She has had three other children, all free from any symptom of syphilis, and there is no history of the disease in the father.

The child now shown was a perfectly healthy baby up to November of last year, when he was eleven months old. A general red rash then appeared, which the mother considered to be the same as her own eruption of the previous September. The infant was seen at this time by a casualty officer at a London hospital Out-Patient Department, and the mother was informed that it was a case of "measles" and she was warned in consequence not to bring the patient up again. The rash, however, did not fade like that of measles and in fact passed insensibly into the dry, scaly eruption seen at the present time. This early eruption was, in all probability, a roseolar syphilide. When shown he had a yellowish-pink eruption, with a fine branny desquamation on the face, about the mouth and forehead, and on the buttocks and lower extremities. There was a small condyloma in the internatal groove. There was general glandular enlargement and a much congested condition of the pharynx, with a moderate degree of snuffles. The child was not wasted and puny as children with congenital syphilis usually are; and although no history of initial lesions comparable to a primary sore could be obtained, the diagnosis offered was that of acquired rather than that of congenital syphilis in view of the time of onset, the clear history of an erythematous eruption which is not often seen in the congenital type, the glandular enlargement and condition of the throat, symptoms which are seldom seen in congenital syphilis.

The case was regarded with much interest, and the members of the Society concurred with the view of the exhibitor as to its real nature.

Dr. J. B. Ridley showed (for Dr. Savill) (1) a female patient, aged 27 years, who had been previously exhibited before the Society with *Lupus erythematosus*. She had been treated with salicylate of bismuth and the lesions had disappeared. The eruption had recurred,

however, for the third winter in the shape of infiltrated red patches upon the dorsal surface of the knuckles.

Some of the members considered this to be a case of Lupus pernio, while others were inclined to the view that the eruption was of the nature of dermatitis hiemalis.

(2) A coloured man, aged 35 years, a native of West Africa, with *Acne keloid*. He had been in London three years, and twelve months ago the lesions appeared at the back of the neck. There was no history of any injury. He had been treated with applications of pure phenol. There was a large patch at the back of the neck, consisting chiefly of papular elevations, occupying an area about three inches in diameter.

Dr. Travers Smith exhibited a young woman, aged 20 years, with a generalised patchy eruption over the body. The patient presented scars of old lupus on the left side of the face and on the inner side of the left elbow. Four months ago the present trouble began in the shape of reddish scaly patches scattered over the body and limbs. The scalp was distinctly scurfy and there was a weeping surface over the left ear. She possessed the characteristic "chilblain circulation." The exhibitor was inclined to the view that the condition had started in the scalp as a seborrhœa.

The general opinion was that the case was one of psoriasis of an unusual type occurring in a tuberculous patient.

Dr. Edward Stainer showed a man, aged 30 years, with a small follicular *syphilide*. His first symptoms appeared last April. The lesions consisted now of large papules, around which were grouped in a more or less circinate fashion smaller ones, best marked upon the thighs. The patient also had abscesses upon the right side of the jaw and neck. There were several enlarged glands but no marked cachexia.

Dr. Wilfrid Warde referred to the well-known observation, illustrated by this case, regarding the frequent connection of the miliary, grouped syphilide with the scrofulous diathesis.

CURRENT LITERATURE.

ON A NEW METHOD OF IMBEDDING IN CELLOIDIN. By J. Redier. (*Journ. des. Sci. Méd. de Lille*, March 3rd, 1905, p. 193.)

The celloidin method has the disadvantages of slowness, unreliability, difficulty of obtaining good penetration in tissues which are bulky or honeycombed, such as the lung, and finally the impossibility of making very fine sections. For two years the writer has employed a method which possesses all the advantages of the classical method, with few of its drawbacks. Its principle was suggested to him by a memoir published by Stepanow in the *Zeitschr. für wiss. Mikros.*, October, 1900.

Two solutions are prepared:

(A)	Ether, 62 per cent.	2 vols.
	Essence of cloves	1 vol.
(B)	Ether, 62 per cent.	40 c.c.
	Essence of cloves	10 c.c.
	Celloidin grated and dried	3 grammes.
	Mix and add drop by drop—	
	Absolute alcohol	1 c.c. or 60 drops.

The essence of cloves should be old. It is essential that the celloidin should be bought in thin chips, dried in air, so that all its water is lost and it presents the appearance of little fragments like nail-parings.

The mixture (A) is made instantaneously, but in (B) the solution of the celloidin in the clove-ether mixture takes two or three days or so, according to the temperature. The former is made in some quantity, generally 30–60 c.c., as it is not sensibly modified by evaporation, and may be used until finished. The solution (B) should be made in the quantity indicated above, because, having the consistency of syrup, it is rapidly thickened by evaporation each time the flask is uncorked.

The tissue having been well dehydrated by passing it through 85, 95, and absolute alcohol, it is left for twenty-four hours in solution (A) (ether-clove), then forty-eight hours in solution (B) (celloidin-ether-clove.) It may remain in the solutions for an indefinite time without harm. In the case of small objects, the time may be reduced to one or several hours for the solution (A), and twelve to twenty-four hours for solution (B). For blocking, little boxes made entirely of paper or with a cork or round of wood surrounded by two or three turns of a strip of paper are used. The height of the box should be at least twice that of the included object, which is placed in position and covered with solution (B) until the solution is completely filled. It is then placed under a bell-jar or inverted glass for at least twenty-four hours, usually for thirty-six and sometimes forty-eight hours. In several hours the solution is reduced by evaporation of the ether and more must be added to fill the box again. Each time the solution is added it is necessary to shake it very quickly to avoid the production of bubbles. The consistency of the block depends upon the manner in which this part of the operation is conducted; the slower the evaporation, the harder will be the block. A very fluid solution has greater penetrating qualities but necessitates a much longer time under the bell-jar; a thick solution penetrates less but hardens more

rapidly. The best method of hardening is by exposure to the vapour of chloroform, and the same bell-jar may be used. It is advisable to wait twelve hours before it is complete; but the time may be prolonged to twenty-four hours or more. The block is then placed in chloroform or 85 per cent. alcohol; after several hours the sides of the box may be removed and the block cut so as to leave about a millimetre of celloidin round the tissue. Finally, it is put into 85 per cent. alcohol, in which it is kept ready for cutting.

This method of imbedding is said to give uniformly good results—a perfectly transparent mass, hardness which is surprisingly different from that of the classical method, homogeneity and uniform consistency, rigidity of the finest sections, such as to partly prevent folding and even rolling, and lastly, facility in obtaining large serial sections of 20 30 μ and of small objects of 5 10 μ.

S. E. D.

THE "HYPERKERATOTIC" GONORRHŒAL ERUPTIONS. Victor Roth. (*Münch. med. Wochenschr.*, May 30th, 1905.)

The author records a case under his own charge and then proceeds to compare it with other recorded instances of gonorrhœal eruptions.

The patient, a man, aged 35 years, was admitted into the hospital on December 25th, 1904, suffering from gonorrhœa, complicated by an inflammation of the tendon-sheaths of the extensors of the right foot. He had contracted gonorrhœa once before, in 1901, and had recovered from this attack in the course of a few weeks and without complications. On his admission into the hospital, the right foot was swollen and painful. A fine crepitation could be felt when the toes were actively moved. Shortly after admission small nodules began to appear on the upper surface of the great toe, just behind the nail. The nodules in this position were five in number, about the size of a barleycorn, brownish-red in colour, and without any red halo surrounding them. They were nearly transparent, giving the impression of fluid contents, yet hard to the touch. It was possible to tear off a horny cover, leaving a red succulent surface, which, however, did not bleed. Similar nodules appeared on the other toes of this foot and also on the left foot as well. The nodules appeared to develop rapidly and to have a brief first stage, in which, after removal of the cover, a slimy, greyish-white substance, composed entirely of softened horn-cells, was extruded. Gonococci were found in the urethral discharge, but none in the contents of the nodules. On January 4th it was noted that from ten to fifteen fresh nodules had appeared, and that the œdematous swelling of the right foot had decreased. On January 10th a florin-sized cluster of petechiæ appeared over the right internal malleolus, and on January 20th a nodule similar to those on the feet appeared on the outer side of the left leg above the malleolus.

The nodules gradually disappeared as the horny covers were thrown off, and the patient left the hospital on February 11th, well. The author proceeds to make some critical observations concerning his case, and to compare it with cases recorded by others.

W. B. W.

REVIEWS.

Atlas and Epitome of Diseases of the Skin.*

In the second edition the value of Mracek's *Hand-Atlas of Skin Diseases* has been considerably enhanced by the addition of a series of new illustrations and a re-arrangement of portions of the text. Coloured plates have been added of Erythema scarlatiniforme, Raynaud's gangrene, Psoriasis capitis, Ichthyosis serpentina, Lupus vulgaris, Ulcera tuberculosa dorsi manus, and Tuberculosis verrucosa cutis, the majority of which are sufficiently realistic to be capable of being diagnosed, without referring to the explanatory text, by any one possessing an average degree of familiarity with the ordinary diseases of the skin. This cannot be said, however, with regard to all the new illustrations, and several of them are too indefinite to be of value as types for the student; the coloured illustration of folliclis, for instance, might be mistaken for scabies, that of Impetigo herpetiformis is far from convincing and might be Dermatitis herpetiformis, and the plate of Bromide acne requires a label to identify it. The two plates of Exanthema bullosum neuropathicum and Ecthyma per totam cutem dispersum strongly suggest malingering and Dermatitis artefacta. It is possible in a book of this type to be too ambitious, and it might have been wiser to have improved a few of the old illustrations rather than to have added new ones of doubtful value. It is unfortunate, also, that the editor did not take this opportunity of stemming the tide of decadence with regard to the spelling of such words as "edematous," "anemia," and "nevi," which are unnecessary mutilations.

A Treatise on Diseases of the Skin.†

The fact that Stelwagon's *Treatise on Diseases of the Skin* has now reached its fourth edition bears a stronger testimony to the value of the book than any appreciative remarks which might be embodied in a brief notice of it. It is only four years since the first edition was published, and it has now assumed the enviable position of being generally regarded as one of the standard text-books on the subject. It has gained the good opinion alike of the students of dermatology on both sides of the Atlantic. Nor is this to be wondered at, for it has all the elements which go to make up a successful text-book—it is sound, practical, concise, clearly written, and excellently illustrated. The present edition brings it up to date, especially with regard to the value of the X-rays, Finsen light, and high-frequency currents in the therapeutics of cutaneous diseases. The illustrations have been increased in number, and several of the familiar coloured plates from Mracek's atlases have been replaced by illustrations of the author's own cases, of which those which portray infantile eczema and lip-changes are of special merit.

* *Atlas and Epitome of Diseases of the Skin.* By Dr. Franz Mracek. Second edition. Translation, edited by Henry W. Stelwagon, M.D. London and Philadelphia: W. B. Saunders & Co., 1905. Price 16*s.* net.

† *A Treatise on Diseases of the Skin.* By Henry W. Stelwagon. Fourth edition. London and Philadelphia: W. B. Saunders & Co., 1905. Price 25*s.* net.

Photographic Atlas of the Diseases of the Skin.*

In this edition Dr. George Henry Fox has published his atlas in four volumes instead of in a series of parts, and each volume contains twenty-four plates, accompanied by a brief but adequate description. Incorporated with the plates there is a short treatise on the various skin affections portrayed. The volumes are of a convenient size, and the letterpress is well printed: the plates are reproductions of photographs and are tinted so as to give them a realistic appearance. With a few exceptions only, the skin affections which are likely to be met with by the general practitioner are illustrated, while the rare conditions which are practically unknown to any but the expert are omitted, the book being intended for the practitioner rather than for the specialist. The arrangement of the volumes, both with regard to the letterpress and the plates, is alphabetical. The atlas should prove of great service to the general practitioner, not only as an aid to the diagnosis of cutaneous diseases but also as a guide to their treatment.

Radiotherapy in Skin-Disease.†

We have much pleasure in welcoming an English translation of Dr. Belot's work on *Radiotherapy and its Application to Skin-Diseases*. The first edition of the book was published in 1904, and as it emanated from Dr. Brocq's clinic at the Hôpital Broca it is introduced by a Preface from the pen of our distinguished French colleague. So great was the success of the first edition that in a few months a second edition was published, of which this translation has been made. The author refers at the outset to the history of Roentgen's discovery, and then describes in considerable detail the apparatus for producing the X-rays and their properties. This part of the book is clearly and simply written, and various fallacies are referred to, such as the idea that if a static machine be employed rather than an induction coil to excite the tube a radiation of greater safety for therapeutic purposes is obtained, whereas "the only important factor in radiotherapy is the quantity and quality of the X-rays themselves, the character of their source being immaterial." The biological effects of the X-rays on the skin and internal organs are described in the second part of the book. The writer then goes on to discuss the application of the rays for therapeutic purposes, and dwells on the importance of the measurement of the quality and quantity of the rays by means of such instruments as Benoist's radiometer and Holtzknecht's chromo-radiometer. He considers that the production of a radio-dermatitis is largely the result of an overdose, and that idiosyncrasy plays only a small part in its causation, though he grants certain variations in the susceptibility of the skin according to the part of the body exposed, the state of the skin, and the age and sex of the patient. The method of application of the rays is next described, and reference is made to the dangers of small doses repeated at short intervals owing to the cumulative action of the rays. He advocates the employment of a

* *Photographic Atlas of the Diseases of the Skin.* By George Henry Fox, A.M., M.D. Physician's edition, in four vols. London: J. B. Lippincott Co., 1905. Price 25*s.* net each vol.

† *Radiotherapy in Skin-Disease.* By J. Belot. Translated by W. Deane Butcher, M.R.C.S. London: Rebman, Limited, 1905. Price 17*s.* net.

single dose, sufficient to produce the desired effect, provided that dose is not so great that it would produce an excessive and destructive reaction, in which case the dose is divided into fractional doses which are given daily till the required quantity of rays is absorbed. The various diseases of the skin which have been ameliorated by the X-rays are then passed in review, the opinions of different authorities quoted, and the author's own case described in detail. In this portion of the book the writer shows a conservative tendency, and is most guarded in avoiding the pitfalls which have rendered so much that has been written on electrotherapeutics unreliable, namely exaggeration and the basing of general statements on insufficient data. Dr. Butcher is also to be congratulated on the production of a most readable translation. Somewhat greater care in the proof-reading would, however, have been well repaid, for it is unfortunate to find, among others, such mistakes as "tricophytes," "plasmon cells," "Brocque," "Stelwagen," and "Doore."

The Changes Produced by Inflammation in the Conjunctiva.*

The Hunterian lectures by Mr. Mayou on the changes produced in the conjunctiva by inflammation cannot fail to interest all those who have studied the histological changes which occur in the skin in inflammation. Both developmentally and structurally the conjunctiva, with its epithelial and subepithelial layers, bears a close analogy to the skin. They are both subjected to similar types of irritation, but the conjunctiva, being more sensitive, reacts more easily.

In the first lecture the writer describes the development and histology of the conjunctiva, and the cellular changes which result in it from inflammation. In the second a series of experiments on the bulbar conjunctiva in rabbits with a view of trying to determine the origin of some of the cells is recorded, and the various forms of conjunctivitis are discussed. The third lecture is devoted to the consideration of trachoma, vernal catarrh, and phlyctenulæ.

Special attention is given to the subject of the cellular infiltrations which occur in the inflamed subepithelial tissue, and the plasma-cell is carefully described and the vexed problem of its origin discussed at considerable length. The view which the author upholds is that plasma-cells are derived from the perithelium and endothelium of the blood-vessels, and that they are possibly slightly altered mononuclear leucocytes, which he believes to be derived from the same source. He considers that it is impossible that plasma-cells have, as is stated by Unna, their origin in fixed connective-tissue cells. The interesting point in this connection is that, practically speaking, the controversy as to whether the plasma-cells are derived from lymphocytes or from fixed cells is almost at an end, since it is becoming more and more generally accepted that the lymphocytes themselves may originate from the endothelium of the vessel-walls, which are fixed mesoblastic cells.

The lectures merit careful reading, and the lecturer is to be congratulated not only with regard to the work he has done but also on the manner in which it has

* *The Changes Produced by Inflammation in the Conjunctiva.* (Hunterian Lectures, R.C.S., 1905.) By M. S. Mayou, F.R.C.S. London: John Bale, Sons, & Danielsson. Price 10*s.* 6*d.* net.

been issued, for the printing of the small volume leaves nothing to be desired, and the excellent original drawings have been adequately reproduced.

J. M. H. M.

The Results of Operation on 240 Lupus Cases, with Remarks on the Modern Treatment of Lupus.*

Professor Lang's Introduction gives an excellent account of the modern methods of lupus treatment, and the book contains a detailed description of his method and the technique adopted in treating a large number of cases. The results of this treatment are wonderfully successful and lasting, and there can be no doubt that in able hands it is second to none, both in curing the disease and giving excellent cosmetic effects. The extirpation of the disease is radical, so recurrence is rare, and the subsequent plastic operation is such as to bring about a minimum of scarring and deformity. The transplanted flaps are adapted with the greatest care and most accurate measurement to the areas from which the diseased tissue has been excised, and their blood-supply is so carefully preserved that only in two cases did complete necrosis of the transplanted tissue ensue. Particular attention was, of course, always paid to the relative pigmentation of the transplanted and the surrounding skin in order to avoid anomalous results. But the description of the necessary technique is given by the authors in such detail, and the precautions advisable are so carefully dealt with, that a perusal of the book is of the greatest assistance to anyone who at times operates on lupus lesions. Recently the operative technique has been enriched by the adoption of Schleich's method of infiltration, and the careful marking out with silver nitrate before operation of the area to be excised, and the employment of chemical and photo-therapeutic methods in suitable cases is fully discussed in the book, with especial reference to the use of Finsen light and X-rays in connection with operative procedures. Thiersch grafts were employed in some cases, and the resistance of these grafts was proved in one case by measles showing itself in the child at the time when the dressing was first changed without any harm resulting to the graft. The book contains most interesting references to questions which of necessity present themselves to the dermatologist who interests himself in lupus; these questions do not always admit of an unequivocal answer, but the discussion of them is at least instructive. One great fact, however, stands out clearly, that early excision is the great secret of success in the operative treatment of Lupus vulgaris.

J. L. B.

* *The Results of Operation on 240 Lupus Cases, with Remarks on the Modern Treatment of Lupus.* An addition to Professor Eduard Lang's monograph, *Lupus and its Operative Treatment.* By Ludwig Spitzer and Alfred Jungmann, with an Introduction by Professor Lang. Vienna: Joseph Safar. 1905. Price M. 6·50.

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SOME CLINICAL ASPECTS OF SYPHILIS.*

By ROBERT B. WILD, M.D., M.Sc., M.R.C.P.,

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There is, perhaps, no subject in medicine or surgery which has so much interest for all classes of practitioners as the subject of syphilis. The general practitioner, the surgeon, the physician, and all classes of specialists are alike confronted in their daily work by the problems presented by this most protean of all forms of disease.

I do not purpose in this paper to give any systematic account of syphilis or to discuss the various papers dealing with its pathology or treatment which have recently been published. During the past year I have revised and analysed my records of hospital patients treated during the past twelve years, and I think it may be of interest to have some account of the incidence of syphilis in Manchester as seen in the practice of the Manchester and Salford Hospital for Skin-Diseases, where we have special opportunities of noting the occurrence of syphilis among the general population apart from the more strictly venereal cases, which are not treated at this hospital.

I have taken as the basis for this paper 1000 consecutive cases of syphilis, which were compiled from 1011 cases in which a diagnosis of syphilis was made on their first visit, and 39 other cases, which,

* An address to the Clinical Society of Manchester.

at first not recognised, were subsequently found to be of a syphilitic character.

Of these 1050 cases 7 of those diagnosed at first as syphilis proved to be non-specific, and 43 cases were re-admissions, where the same patient was under treatment more than once at intervals of more than six months. The 1043 cases of syphilis (representing 1000 individual patients) occurred among 20,265 hospital out-patients, giving a percentage of 5·17.

It is interesting to note that among 2000 consecutive cases seen in private practice I found 99 cases of syphilis, giving a percentage of 4·95. These figures compare favourably with the statistics given by Dr. Radcliffe-Crocker, who found 6·1 per cent. of syphilis in 10,000 cases seen in hospital out-patient practice in London. They also show a much smaller proportion of syphilis than is apparently found in America, where the statistics collected by the American Dermatological Association give a percentage of syphilis varying from 8·4 to 10·9 during the past ten years.

The following table shows the distribution of these 1000 individual cases:

Analysis of 1000 *Cases of Syphilis.*

Type.	Males.	Females.	Total.	Minimum age.	Maximum age.	Average age.
Congenital ...	37	39	76	12 days	26 years	—
Primary	38	17	55	Males 14 yrs.	58 „	31·6
				Females 2 „	45 „	29·3
Secondary ..	97	179	276	Males 1 „	58 „	28·7
				Females 2 „	51 „	28·2
Tertiary	263	330	593	Males 19 „	72 „	38·3
				Females 13 „	73 „	39·1
Total	435	565	1000			

Congenital Syphilis.

The 76 cases of congenital syphilis form two distinct groups. The first group consists of 60 cases from twelve days to two years old; in these the symptoms were of the secondary type; the second group of 16 cases, from three years to twenty-six years of age, presented the

tertiary forms of lesion and also the stigmata of an earlier attack. These cases were chiefly of an ordinary character, though one point worthy of note was the absence of any typical Hutchinson's teeth in the older patients. One feature of interest is the very rapid response to mercurial treatment shown by the 60 infantile cases of secondary type; untreated congenital syphilis is one of the most fatal forms of infantile disease, and though many of these cases were very severe, only three died while under treatment.

That treatment of the fœtus while *in utero* may be effective is, I think, shown by the following case:

A married woman, aged 36 years, three to four months pregnant, suffering from severe and widespread secondary rash, condylomata, and syphilitic throat. She was put under treatment, improved greatly, and brought forth a healthy child at term. After parturition, possibly owing to the suspension of treatment, she relapsed and returned to the hospital. I had many opportunities of seeing the child up to four months old, and it showed no signs of syphilis. The mother was under treatment intermittently for over two years, and though I did not see the child after the first four months, the mother assured me that it remained well.

As regards the diagnosis there is sometimes a difficulty in distinguishing a bullous syphilide from pemphigus neonatorum. On one occasion we had a small epidemic of pemphigus neonatorum—eight or nine cases within about three weeks, which all occurred in a limited district and in the practice of either one or two midwives. This disease is certainly a form of septic infection, and the cases usually yield rapidly to simple antiseptic treatment. The first two or three cases strongly suggested a bullous syphilide, though the bullæ were larger, more tense, and different in distribution, while other signs of syphilis were absent and the babies not more than two or three weeks old. In six cases of congenital syphilis the symptoms appeared within three weeks of birth, but the great majority first developed symptoms between four and twelve weeks after birth.

It was at one time supposed that tertiary syphilis in the parents did not affect the offspring; that this is erroneous is shown by several of my cases, in which women attending with syphilitic infants showed only the marks of former tertiary lesions.

With respect to the cases of congenitally syphilitic older children and adults, I am inclined to believe that as a rule mercury is more valuable than iodides, though the lesions may be ulcerations of a tertiary type.

Primary Syphilis.

The first point to which attention may be drawn is the comparatively advanced age of the cases of primary syphilis. This is due to the fact that we do not take at the Skin Hospital the ordinary venereal cases such as are most commonly found in young people of both sexes, and which find their appropriate treatment at the Lock Hospital.

A second point, due to the same cause, is the considerable proportion of extra-genital chancres. It is usually considered that about 10 per cent. of cases of syphilis are of extra-genital origin—the so-called "Syphilis insontium." Of the 55 primary cases in the above table no less than 14 were of this character, and in 4 cases of secondary syphilis the primary chancre had been on an extra-genital site which was still recognisable.

The distribution of the 18 extra-genital chancres was as follows:

Lips, 8 (upper 3, lower 5); cheek, 1; gum, 1; tongue, 1; tonsil, 1; eyelid, 2 (upper 1, lower 1); thumb, 1; fingers, 3.

Of the 8 lip chancres 6 were in women from seventeen to thirty years of age, and probably due to kissing. One was a case of secondary syphilis in a male baby following a primary sore on the lip when a few months old; for this case I am indebted to Dr. E. M. Brockbank, who saw the case earlier and recognised the primary lesion. The eighth case was a man of twenty-eight, who had two simultaneous chancres on the lower lip.

The cheek chancre was in a boy of fourteen; the source of infection could not be traced.

The gum chancre was in a girl of twenty-one; it followed the extraction of a tooth.

The tongue chancre in a man of forty was apparently due to the use of a companion's pipe.

The tonsillar chancre in a man of twenty-eight followed some local applications to a sore throat.

The finger chancre in one case was in a midwife, aged 45 years,

and due to infection while conducting a labour. The source of origin in the other two finger cases—a female, aged 33 years, and a male, aged 28 years—could not be traced.

The thumb chancre was in a woman, aged 22 years, who had been helping her sister-in-law with the house-work. This sister-in-law was a patient of the Skin Hospital with secondary syphilis.

In connection with these cases of primary syphilis I should like to refer to a small group of four cases of a somewhat rare condition—viz. infantile acquired syphilis.

We are so apt to look upon syphilis in children as congenital that it is easy to forget the possibilities of children acquiring syphilis from other members of the family. One of the four cases is that of the chancre on the lip already referred to; the other three cases were girls, aged respectively 2, 3½, and 4 years, whose mothers were patients of the hospital with recently acquired syphilis in the secondary stage. The children presented genital primary chancres, and in two of the cases the girls slept with the syphilitic mother. One of these girls was the child of the woman already referred to, who brought forth a healthy baby under mercurial treatment. Here we had at the hospital the curious family combination of a secondary syphilitic mother, a primary syphilitic girl of 3½ years, and a healthy baby.

Secondary Syphilis.

The onset of the secondary symptoms is often marked by a mild febrile reaction. In a few cases this is much exaggerated, and the syphilitic fever may cause great difficulty in diagnosis. In one of my cases the patient was supposed to be suffering from pneumonia, and the rash, when it appeared, was at first put down to an antipyretic drug. In another case the temperature reached nearly 103° F., there was very severe pain in the bones and joints, the rash was pustular in character, and a diagnosis from smallpox was, for a few days, exceedingly difficult. Both these cases proved to be of a severe type.

Another form of onset which is not infrequently overlooked is severe headache of neuralgic type. In two cases, both women, this headache, which was not connected with dental caries or eye-strain, lasted between two and three weeks in spite of treatment, and only

disappeared when the appearance of the rash cleared up the diagnosis and specific treatment was instituted.

The type of eruption present when the patient was first seen in the 276 cases of secondary syphilis was as follows:

Type.	Males.	Females.	Total.
Macular	13	28	41
Maculo-papular	4	14	18
Papular	23	37	60
Large papular (nodular)	1	4	5
Squamous	35	49	84
Pigmentary	0	7	7
Purpuric	1	2	3
Pustular	9	13	22
Rupial	2	3	5
Framboesial	5	10	15
Mucous membranes only affected	4	12	16
	97	179	276

No correspondence could be traced between the age or sex of the patient and the type of eruption. The squamous papule was the predominant lesion, and the early macular, or roseolar, rash came next in frequency. The pustular rashes were fairly numerous, and the most interesting feature is the large proportion of framboesial and the small number of rupial lesions.

The purpuric rash was the least frequent form, and the cases will be referred to later.

In several of the early papular rashes a tendency to vesiculation of a few papules was noted, but no case of general vesicular rash occurred.

The pigmentary syphilide described by Fournier as occurring on the neck in women was noticed seven times. The cases were of the diffuse type of yellowish-brown pigmentation with white macules. In one case several red slightly raised papules were present, and when these disappeared under treatment white spots remained in the pigmented skin. Two cases of leucoderma were also found in men with tertiary syphilitic lesions; probably this was merely a coincidence, as there was no sign or history of syphilitic lesions specially affecting the leucodermatous areas.

The chief difficulties in the diagnosis of secondary syphilis were due to the co-existence of other skin-diseases. Of these the various forms of seborrhoic dermatitis were the most common and gave the most trouble.

In three cases general psoriasis co-existed with the secondary syphilide, but there was little difficulty in distinguishing the one from the other. In four cases the pustular rash of scabies was mixed with a secondary syphilide, in one case erythema multiforme, in another lichen planus.

In the case of a young man whom I had the opportunity of seeing in private practice a severe attack of scarlet fever supervened upon a well-marked secondary rash and syphilitic throat, and the resulting appearances on the skin and throat were of a most unusual and complicated character. He made a good recovery from both diseases.

Purpuric Syphilide.

The following brief notes of the three cases may be of interest, as this form of eruption appears to be rare and is hardly noticed in the ordinary text-books. Little appears to have been written upon it since Sir Stephen Mackenzie's paper in 1879.

(1) Dark-complexioned woman, aged 20 years, who had been married to a foreigner three months previously. She was moderately anæmic and had a brownish-red maculo-papular rash all over the body and the upper parts of the limbs. The papules were grouped in bunches, especially on the back near the axillæ, and a number of those on the body and legs were hæmorrhagic; between the papules were small purpuric spots and larger blotches. On the chest and arms the hæmorrhagic characters were less marked. The throat presented an ordinary type of superficial secondary ulceration and symmetrical congestion; there were several mucous plaques on the tongue and commencing condylomata on the labia. She was for a time very seriously ill; the temperature rose to nearly 103° F.; there was hæmorrhage from the nose, throat, and rectum. She had to be taken as an in-patient, and eventually recovered completely. She was quite well when last seen, three years later. The question which arises in this case is whether the purpuric rash was merely coincident with the syphilis, or whether the syphilitic poison had produced a

blood condition predisposing to hæmorrhage into the skin and later from the mucous membranes. There was no history of potassium iodide having been taken in any form.

(2) Man, aged 30 years. Seven months after the primary sore, the trunk and limbs presented a widely-spread, brownish-red, papular rash. The papules were up to about a third of an inch in diameter flattened, somewhat grouped, and on the back of a scaly character. Many of the papules were hæmorrhagic and a number of purpuric spots were mixed with the dorsal rash. Mucous plaques were present on the tongue, the corner of the mouth and neighbouring parts of the lips were ulcerated, and there was syphilitic iritis of the right eye.

(3) Married woman, aged 28 years, six months pregnant. The back and chest covered by a brown papular syphilide of distinctly corymbose type. A number of purpuric spots were found between the papules, and several of the brown papules showed hæmorrhagic centres. Mucous plaques were present on the lips and condylomata on the vulva.

Frambœsial Syphilide.

This form of lesion is not very rare, and as it not infrequently escapes recognition as a syphilide it is worthy of more attention than it receives in some of the text-books.

The eruption sometimes resembles yaws so closely that many medical men have been convinced of the identity of yaws and syphilis.

Our knowledge of the framboesial eruptions is largely due to Mr. Jonathan Hutchinson, whose description and published cases are so well known that is unnecessary to do more than state the main features of my own cases.

During the last twelve years I have had 15 well-marked hospital cases, and 3 of doubtful character, and have also seen 2 cases in private practice. The percentage of male and female cases was almost the same (see table, p. 166). In all these the characteristic rash has been chiefly on the head and face, occasionally on the palms and wrists, rarely on the covered parts. In several cases other syphilides—usually scaly papules—were also present on the body and limbs.

Each lesion is a proliferating papule or confluent group of papules;

it forms a raised patch from a quarter to half an inch in diameter, and sometimes as much as half an inch in height. Occasionally larger, irregular-shaped patches are seen, due to coalescence of neighbouring lesions.

When just seen the lesions are generally crusted, and on removing this the red fungating papule with a "raspberry-like" surface is visible, from which the name is derived; this surface discharges foul pus, and when the lesions are numerous the smell is most offensive. Healing is usually followed by scarring.

In regard to the treatment of these cases I have found that energetic local antiseptic treatment is of the utmost importance; without this neither mercury nor iodides have much influence on the lesions.

I am inclined to look upon these framboesial lesions as syphilitic papules infected by some pyogenic organism, possibly a streptococcus. I have examined the pus from several cases and always found numerous micro-organisms, including streptococci, but have not isolated any by cultivation. It is a curious fact that in two of the cases severe typical erysipelas developed from framboesial lesions on the scalp and ran its usual course.

Tertiary Syphilis.

Three well-marked types made up the large majority of the cases, viz. (1) gummata and deep gummatous ulceration. Many of these were on the legs, but no part of the body was exempt. Some of the most destructive lesions were on the face. (2) A non-ulcerated, nodular, asymmetrical rash, often serpiginous, sometimes spreading over a wide area, and healed without scar in the central regions. This form was frequently combined with a seborrhoic dermatitis, especially when on the face, neck, or scalp. (3) A similar rash spreading peripherally, but with ulcerated borders, the centre healing as a scar more or less superficial, and often pigmented.

Most of these cases were of ordinary type, and I shall only refer to a few points in which I have taken special interest.

The first point is the wide difference of ten years between the average age of the secondary cases (28·5) and that of the tertiary cases (38·7). This is almost identical for males and females (see table, p. 162).

The average age of the tertiary cases is, however, too high for the first appearance of tertiary lesions, since many of the patients showed, by the presence of scars and pigmentation, that they had previously suffered from the same form of disease.

When these recurrent cases were eliminated as far as possible a sufficient number remained to show that from five to seven years of freedom not infrequently intervenes between the termination of the secondary and the onset of tertiary lesions. This is of considerable importance in the endeavour to ascertain the proportion of cases of syphilis which suffer from tertiary lesions; from the large number of these cases (59·3 per cent. of our hospital syphilitics) I am inclined to believe that the usual estimate as to the incidence of tertiary lesions is too low, owing to the difficulty in following up patients for a sufficient length of time. If this is not the case, there must be a more widespread syphilisation of the general working class population than is usually supposed. It is of little importance to determine an average time between the secondary and tertiary lesions when the extremes are so wide apart. Precocious tertiary lesions are not very rare, especially in patients of feeble constitution or suffering from anæmia.

The three following cases are instances: An anæmic woman, aged 24 years, had been a hospital patient for a non-syphilitic disease for nearly two years. She married, and three months afterwards presented herself at the hospital with a primary chancre on the lower part of the left labium majus; a secondary rash followed, and within six weeks a gumma formed near the right knee, and rapidly broke down, so that at not more than five months after infection we had present, at the same time, the still evident induration of the primary, a fading secondary rash, and a typical tertiary ulceration. I saw her four years later, and she had no sign of syphilis.

Another case in a woman, aged 34 years, who neglected treatment, was somewhat similar; a gumma formed within six months of infection.

A third case was a man, aged 50 years, with extensive secondary syphilis, who developed a gumma on the thigh while under mercurial treatment.

On the other hand, I may mention, as an extreme instance of delayed tertiary syphilis, the case of a medical man who, at 27 years of age, was unfortunate enough to contract a chancre of the finger from an

obstetrical case. He had a severe attack of secondary syphilis, but no further trouble for thirty-eight years, when, at sixty-five, the right testicle began to enlarge painlessly. The testicle reached the size of a turkey's egg, and was of typically syphilitic character. Under iodide of potassium it disappeared completely in about four months, leaving only a nodule of fibrous consistence to represent the affected organ. He had no other signs of syphilis, but died a few years later from cerebral hæmorrhage.

In the etiology of tertiary lesions I have been much impressed by the frequency of two factors—viz. trauma, and some inflammatory affection of the skin. It would, perhaps, be going too far to call these exciting causes, but I think they may at least be considered localising factors. It is possible that the injured or inflamed tissue loses its resisting power, and that the latent specific virus, if present in the tissues or in the blood, finds there a suitable soil for its renewed activity. The traumatic cases are most commonly found affecting the hands or the lower extremities below the knee in the labouring classes. Many of them, especially those on the palms and soles, are extremely difficult to cure, and relapse time after time when the patient resumes work.

The various forms of seborrhoic dermatitis and acne rosacea are the commonest inflammatory lesions which complicate tertiary syphilides and often seem to precede and determine the specific outbreak.

One patient of this type has been at the hospital four times during the last five years with tertiary syphilis and seborrhoic dermatitis of the scalp and nape of the neck. The latter region now presents a hypertrophic scar with scattered tufts of hairs growing apparently from the same follicle, a condition quite indistinguishable from the so-called acne keloid.

The question of leukoplakia lingualis in its relation to tertiary syphilis is an interesting one. I have noted it in a considerable number of cases in men where smoking was probably a contributory cause; in several cases it was, however, found in non-smokers, and two well-marked cases occurred in women, also non-smokers.

Finally, I wish to refer to the curious fact that in nearly 600 cases of tertiary syphilis affecting the surface of the body only three showed symptoms of disease of the nervous system. I do not know whether those who see large numbers of cases of syphilitic nervous disease

also find concomitant skin-lesions. As the skin and the central nervous system are both epiblastic tissues it is interesting to inquire whether severe skin-lesions may not possibly exercise a beneficial effect by sparing the more delicate and important tissues of the nervous system from the incidence of the syphilitic poison.

Treatment.

The difficulty in estimating the relative value of different methods of treatment in syphilis is largely due to the fact that most cases of primary and secondary syphilis will recover sooner or later spontaneously without any treatment whatever. That this is the case is shown by the number of patients with tertiary lesions who have never had any specific treatment, and have, nevertheless, recovered from the primary and secondary symptoms.

I cannot go so far as Dr. Unna, who says that "even the most severe secondary symptoms ultimately disappear without any treatment," or as Dr. G. H. Fox, of New York, who says that "the disease tends in every case to run a natural course and heal spontaneously."

This tendency to natural recovery is, undoubtedly, the explanation of the great success claimed for various methods of treatment, especially those in vogue in England during the first quarter of the last century, when there was a great reaction against the use of mercury.

Quite recently there has been a revival of the non-mercurial treatment of syphilis and vegetable alteratives in various combinations under attractive names have been introduced to the profession. Among these are found Cascara amarga (Honduras bark), Stillingia sylvatica (Queen's root), Berberis aquafolium, Phytolacca decandra (poke root), Lappa minor (burdock), Franciscea unifolia (manaca root), Xanthoxylum carolinianum (prickly ash), Siegesbeckia orientalis, and Gonolobus condurango.

No one of them has been shown to have any action in curing syphilis, and De Lydstone, of Chicago, writes concerning some of them: "A trial of these things demonstrates their unreliability and shows more plainly than ever the value of iodine and mercury. As bitter tonics the vaunted vegetable alteratives are all more or less useful, but as specifics they are arrant humbugs."

I am not, however, prepared to condemn all vegetable alteratives as useless. I believe that I have seen considerable benefit from sarsaparilla in tertiary ulcerations where both mercury and iodides have failed.

It is a curious fact that sarsaparilla and some other drugs which have had a reputation as anti-syphilitics in their native countries should all contain saponins, a group of toxic glucosides which have a very powerful and peculiar action upon the blood-corpuscles. Some of the saponins are not very stable bodies, and as regards sarsaparilla I have found that the dried drug varies widely in its activity, as shown by the saponin action, and on keeping it may become entirely inert. Possibly the failure of sarsaparilla in so many cases is due to the deterioration produced by keeping the dried drug.

While admitting that many cases of syphilis will recover without mercury, I have no doubt whatever that the duration and severity of both primary and secondary symptoms are much lessened by its use, and, above all, that the liability to tertiary lesions, though not entirely prevented, is much diminished.

This is, I think, shown by the fact, brought out by more than one writer, that while in private practice the incidence of tertiary syphilis may be reduced to 5 per cent. by proper treatment, it usually reaches 10 to 20 per cent. in cases where treatment has been neglected.

Professor Cushney, I believe, accurately summarises the value of mercury in syphilis when he says: "Mercury is of benefit in a very large proportion of cases, although not essential to the treatment of some favourable ones, and it is unable to arrest the progress of the disease in a certain proportion of malignant forms."

The most important point in the treatment of syphilis is the prevention of tertiary lesions, and for this purpose I believe it is necessary that mercury should be given until the onset of physiological symptoms shows that all the tissues of the body have been subjected to its influence. Slight soreness and swelling of the gums is usually the first sign of mercurial action, and so long as this is produced it does not matter how the mercury is administered.

In ordinary cases mercurials given by the mouth are the most satisfactory, and the dose can be readily controlled so as to produce the required action with safety and certainty. The variety of mercurial preparations is so great that I have never found any difficulty

in finding some preparation that could be taken for months together without disturbing the alimentary canal even in the most sensitive patient.

For routine hospital practice the perchloride or the hydrarg. c creta is usually sufficient, but occasionally several preparations have to be tried before the idiosyncrasies of a susceptible patient can be met.

In special cases, such as Lock Hospital practice and the naval and military services, the administration of mercury by intra-muscular injections has great advantages, and it is often of value in exceptional cases where the patient neglects treatment or where a rapid effect is required in the secondary period. For this purpose I prefer such a soluble salt as the sal alembroth to the insoluble grey oil or calomel.

Some of the advocates of intra-muscular injections in all cases of syphilis recommend only small doses, and are satisfied to see the secondary symptoms disappear quickly without producing any signs of mercurialism. I cannot but consider this plan of treatment to be insufficient and a possible source of future danger to the patient. I have recently seen two cases of severe tertiary syphilis in patients treated by intra-muscular injections, and I am not aware of any evidence that it is more efficacious in preventing tertiary lesions than safer and pleasanter methods.

In a few cases inunction is useful, and in all cases of severe secondary eruption the inunction of a mild mercurial ointment into the actual lesions seems to be beneficial, and promotes their involution; for lesions on exposed parts this is often a matter of some importance. Welander's method of a mercurial amalgam, dusted into a bag of lint and applied to the chest, is cleanly, and in mild cases, efficacious, but I am inclined to think much of the benefit is due to absorption through the skin rather than by the respiratory tract. I have noticed in two cases of generalised eruption that the lesions on the skin in contact with the mercurial bag disappeared much more rapidly than those on the rest of the body.

The intravenous injection of mercury I have not tried, as the method is not suitable for out-patient practice and is not free from danger. When other, safer, methods will so rapidly produce all the physiological action of mercury I do not see that any possible gain in time can compensate for the extra risk.

An important point in the treatment of primary syphilis is the time at which specific treatment should commence. While not advocating the immediate exhibition of mercury for every venereal sore, I believe that its early use in primary syphilis aids in the healing of the chancre and diminishes the severity of the secondary eruptions. It does not, however, seem to diminish in the same degree the severity of the throat lesions. My own custom is to give mercury in cases of venereal or other sore of specific character as soon as the nearest lymphatic glands show signs of enlargement and induration. I have never regretted giving mercury early, but have several times regretted the withholding of mercury until the secondary rash has appeared.

In the treatment of secondary syphilis the most practical question is the duration of the mercurial course. Since the ideal aim of treatment is to maintain the influence of mercury upon the tissues for a sufficient length of time to effectually destroy the syphilitic virus, but without injury to the tissues of the patient, it is obvious that the rate of elimination of mercury from the body is of great importance. There is no doubt that when a mercurial course of some weeks' duration has been given mercury can be detected in the urine for several months after the last dose, and for this time the patient is still under the influence of the drug. In actual practice it is rarely practicable to examine the urine for mercury, but the treatment by intermittent courses of mercury, with intervals of not more than three months between the courses, is really based upon the slow rate of excretion. Treatment on these lines continued for two years gives satisfactory results in the ordinary run of cases.

In connection with this question of excretion is the point as to whether it is desirable to give alkaline iodides with mercury in secondary cases. There is no doubt of the value of the mercuric iodide in syphilis, and there is no objection to the use of sufficient quantities of potassium or sodium iodide with mercuric chloride to form the iodide and act as a solvent. I must, however, agree with Sir William Gowers in his opinion that full doses of the iodides ought not to be given with mercury, as they aid in its elimination and prevent its action on the body. I have several times seen patients who had taken mercury with iodide of potassium for weeks without any sign of mercurialism, and without much effect upon the disease. When the iodide was stopped and the same dose of mercury continued

swelling of the gums soon occurred and the rash concomitantly improved.

With respect to tertiary syphilis mercury is useful in preventing recurrence, and is, in some cases—especially where proper treatment has been neglected or omitted—of great value in the treatment of the serpiginous and nodular eruptions. When, however, deep ulceration is present mercury must be given with great care; it sometimes seems to cause rapid spread of the ulceration. I have seen destruction of the uvula and soft palate within a few days under mercurial treatment for tertiary ulceration of the throat, and I have also seen rapid extension of cutaneous ulceration after an injection of mercury. In these cases of deep gummatous ulceration iodides in full doses produce the best results, and where they fail or cannot be tolerated sarsaparilla seems often to be of value either alone or as a vehicle for the iodides.

The action of the iodides in syphilis does not appear to be of a specific nature, but only part of a more general action they possess in causing the absorption of any lowly organised cellular infiltration. In secondary syphilitic lesions they do not show any beneficial effects, nor do they prevent the relapse or recurrence of tertiary lesions. I have seen fresh tertiary lesions form while the patient was actually taking 60 grains of potassium iodide daily.

The indication for iodides is the presence of cellular infiltration, and to promote its absorption they are best given in full doses until the required result is obtained, when they may be stopped and a mercurial course be given.

In some cases mercury can be combined with the iodides with advantage in tertiary syphilis, where the iodide action is more required than the mercurial one, but the effect of the iodides in eliminating the mercury must be allowed for. Of the iodides I prefer the potassium salt on account of its greater rapidity of diffusion.

Finally, I wish to point out the danger of treating the disease only, to the neglect of the patient. I have repeatedly seen the best directed specific treatment fail to do good in anæmic patients and improvement at once take place when iron was added to the medicine. Similarly quinine, strychnine, and cod-liver oil are extremely useful, and in tertiary cases alcohol is often of value.

Where pain is severe opium may be used much more frequently than it is at the present time, and bromides for the control of that restless nervous state which so often develops into a condition of syphilophobia and makes the patient's future life a perfect misery.

A NOTE ON THE DIMINISHED PHAGOCYTIC POWER OF THE EOSINOPHILE CELLS OF THE BLOOD IN A CASE OF DERMATITIS HERPETIFORMIS.

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It is of considerable interest to record the following experiments, despite the fact that the observations are limited to one case:

The patient, a case of Dermatitis herpetiformis, was an in-patient at the Sussex County Hospital, under Dr. Gordon Dill. She had had several previous attacks of the disease.

On January 6th, 1906, Dr. Bushnell made a differential blood-count, and found 69·6 per cent. of coarsely granular eosinophiles, 16 per cent. polymorphonuclears, and 14·4 per cent. of large and small lymphocytes in total of 38,800 per c.mm.

Again, on January 16th in 524 cells were—

	Per cent.	Total per c.mm.	Normal total per c.mm.
Polymorphonuclears	12	5,772	6,500
Eosinophile polynuclears	77·2	37,133	300
Lymphocytes	10·6	5,098	3,100
		48,003	

On January 16th, 1906, A. Winkelried Williams, who was working at the Stephen Ralli Memorial Laboratories upon opsonins by Wright's method, compared the patient's leucocytes with Bushnell's in regard to their power of engulfing tubercle bacilli. The method was as follows: Some of the patient's blood was received into a solution of citrated salt, well shaken up, and centrifuged. The clear liquid was pipetted off, and the leucocyte layer removed and mixed

with fresh citrated salt, and again centrifuged, and the washed leucocytes thus obtained used for the experiment. Some of Bushnell's leucocytes were obtained and washed in the same manner. A tube of Williams' blood was centrifuged, and the serum used for the experiments.

First experiment.—Two parts of Bushnell's leucocytes, two parts of Williams' serum, and one part of tubercle bacilli emulsion were pipetted, mixed and incubated fifteen minutes at 37° C. by Wright's method for determining the opsonic index, and stained for tubercle.

A count of seventy-two polynuclear leucocytes showed they contained seventy-six tubercle bacilli—*i. e.* average 1·07 per leucocyte.

Second experiment.—Two parts of Dermatitis herpetiformis case leucocytes, two parts of Williams' serum, and one part of tubercle bacilli emulsion, were treated in exactly the same manner as in Experiment 1.

A count of 108 polynuclear leucocytes was made, and only sixty-nine bacilli were found in them—*i. e.* average 0·64 per leucocyte. The patient's leucocytes thus showed a considerably weakened power of phagocytosis, the proportion being: Bushnell's leucocytes, 1·0; patient's leucocytes, 0·6.

On February 5th, 1906, the patient's blood was again examined.

Winkelried Williams made a differential count of 565 white blood corpuscles, and found 73·5 per cent. of eosinophiles. He then tested the phagocytic power to tubercle bacilli, again using in this experiment two controls—*i. e.* Bushnell's and his own leucocytes.

First experiment.—Two parts of Bushnell's leucocytes, two parts of Williams' serum, and one part of tubercle emulsion, were treated as before. Result: Fifty polynuclear leucocytes showed an average of 3·3 tubercle bacilli per cell.

Second experiment.—Two parts of Williams' leucocytes, two parts of Williams' serum, and one part of tubercle emulsion, were treated as before. Result: Fifty polynuclear leucocytes showed average 3·8 tubercle bacilli per cell.

Third experiment.—Two parts of Dermatitis herpetiformis leucocytes, two parts Williams' serum, one part tubercle bacilli emulsion, treated as before. Result: Fifty polynuclear leucocytes showed average 2·2 tubercle bacilli per cell, the proportion being: Bushnell's leucocytes, 1·0; Williams' leucocytes, 1·1; patient's leucocytes, 0·6.

On March 6th, 1906, Bushnell again made a differential count and found 71 per cent. eosinophiles, 15·9 polynuclear, 3·3 large lymphocytes, and 9·6 small lymphocytes in a count of 332 cells. The total number was 16,000 per c.mm.

On March 8th, 1906, Williams made a differential count, and found 66·5 per cent. eosinophiles; polynuclear, 20·6; and lymphocytes, 12·9. Unfortunately, the clotting of the patient's blood in the tube of citrated salt prevented him from obtaining enough leucocytes, so the test of phagocytic power was not applied.

On March 13th more of patient's blood was obtained, but again it clotted in the tube. This time Williams teased out the clot in fresh citrated salt, and incubated it for a short time at 37° C. This caused a number of leucocytes to leave the clot, and these were washed and used for the experiment, Bushnell's leucocytes again being used for the control. The serum used, as before, was from Williams' blood. A count of polynuclear leucocytes was made from both specimens, and it was found that Bushnell's leucocytes contained an average of 1·34 per cell and the patient's 0·88 per cell, the proportion again coinciding with former tests—*i. e.* Bushnell's cells, 1·0; patient's cells, 0·67.

Unfortunately, our material in Brighton is limited, and although we have waited many weeks no fresh case of Dermatitis herpetiformis has turned up. It would be of great interest if other observers would make similar experiments in cases of either Dermatitis herpetiformis or pemphigus, or in bilharzia or ankylostoma, and we send this note to the *British Journal of Dermatology* with this object. We hope to extend our examination of the phagocytic activity of colourless cells to myelocytes and lymphocytes as opportunity arises.

Metchnikoff (1) states that, especially after the researches of Mesnil (2), true eosinophile cells are able to devour foreign bodies, especially micro-organisms, and that they must, therefore, be regarded as phagocytes belonging to the group of microphages. It was formerly thought that eosinophile cells (which are said to be identical with the "overfed" cells of Ehrlich and the clasmatocytes of Ranvier) never ingested foreign bodies. Our observations point to the truth being a mean between these two statements as regards the activities of these cells to the tubercle bacillus, which may be regarded as an indifferent micro-organism in this case. The importance of the part

played in this respect by leucocytes of all classes is seen in Dominici's findings in the spleen of a rabbit affected by typhoid septicæmia: it had *undergone myelogenous transformation* (3). Again, the phagocytic powers of endothelium and large lymphocytes is a well-established fact, as in enterica, dysentery, etc. (Mallory). In a recent case under the care of Dr. E. Hobhouse at the Sussex County Hospital, Brighton, there was noted to be an extraordinary *generalised response on the part of plasma cells to a hæmic, visceral, and lymphatic glandular infection by the Streptococcus pyogenes* (5). *Plasma cells are to be regarded as originating from lymphocytes* in the glands and viscera in this and in other instances (6), and illustrate the part played by various colourless blood-cells under certain infective conditions. Similarly the possession of a sense of "taste" by leucocytes, *i.e.* of chemiotaxis, is widely recognised (4). At present the precise function of eosinophile cells, however, cannot be defined in their *rôle* in the production of immunity.

1. METCHNIKOFF.—*Immunity in Infective Diseases*, Ch. IV, p. 77, *et seq.*; translated by F. G. Binnie, 1905.

2. MESNIL.—*Ann. de l'Inst. Pasteur*, Paris, 1895, t. ix, p. 301.

3. DOMINICI.—*Arch. de Méd. Expér.*, Paris, 1901, t. xiii, p. 1.

4. J. O. WAKELIN BARRATT.—"The Action of Acids and Alkalies upon Living Protoplasm," *Brit. Med. Journ.*, July 1, 1905; LEBER, *Fortschr. d. Med. Berlin.*, 1888, Bd. vi, S. 460, "Die Enstehung der Entzündung," Leipzig, 1891; also C. BORDET, *Journ. publ. par la Soc. roy. d. Sc. Méd. et nat. de Bruxelles*, February 3rd, 1890.

5. HOBHOUSE, E.—*Sussex County Hospital Reports*, 1905–6.

6. CLELAND.—"The Rôle of the Lymphocyte," *Path. Soc. Trans.*, 1905; MILLER.—"Histogenesis of Tubercle," *ibid.*

SOCIETY INTELLIGENCE.

THE DERMATOLOGICAL SOCIETY OF LONDON.

A MEETING of this Society was held at 11, Chandos Street, Cavendish Square, on Wednesday, April 11th, 1906, Mr. H. WILLMOTT EVANS in the chair.

Mr. WILLMOTT EVANS showed a case of *Papilloma lineare*. The patient was a girl, aged 10 years, and from birth she had had rough patches and lines on the skin; they had increased to some extent for a year or two after birth, but since the second year the only change

noticed had been that the patches were occasionally excoriated by scratching or other injury. The chief lesions were as follows: on the back of the right hand, extending from the distal interphalangeal joint of the index finger upwards in a straight line to the wrist, and then inwards towards the inner border of the forearm was a red, rough, raised patch from a quarter to half an inch wide; the prominences were papilliform, and here and there were excoriations and slight scars. Similar but much less marked lines of papillomata were visible on the right shoulder and back and below the right angle of the mouth. The patient complained slightly of the itching, but the chief cause for her being brought for treatment was the appearance of the hand. All the lesions were confined to the right half of the body. Mr. Evans pointed out that though the malformations were longitudinal in direction they did not correspond to the distribution of any nerves. He considered that the lines corresponded rather to developmental areas.

Dr. Graham Little showed—(1) a case of *Lichen planus annularis* in a man, aged about 40 years. He had had an eruption on the body in the present position for some four months; this was not accompanied by any notable itching or other subjective symptoms. When seen for the first time at St. Mary's Hospital, he had on the abdomen a few discrete papules a little like those of Lichen planus but by no means characteristic of this disease; and more numerous, rather deeper coloured, ring-shaped patches the size of a threepenny-piece, which were distributed chiefly upon the lower part of the abdomen and upper part of the thighs. The eruption was confined to these parts. Upon the mucous membrane of the mouth on the inner surface of the cheeks there was a linear streak of raised white epithelium, running right across the cheek from front to back, and a similar white raised line was seen encircling the glans penis in its mid-diameter. The complete absence of itching and the undecisive nature of the papules had made the exhibitor a little doubtful of the diagnosis, and a papule was accordingly excised for microscopical investigation, and this demonstrated the disease to be Lichen planus. The ring-shaped patches seemed to be made up of coalesced papules and not to be the result of involution in the centre of the ring.

(2) A case of *Hemi-macroglossia* in a girl, aged 14 years. The

right half of the tongue was affected, this portion of the organ being much larger than the other half and covered with the large papillæ characteristic of this condition. In consequence of this thickening the tongue when protruded pointed to the left side of the face, but the deformity was not sufficiently great to cause the tongue to extrude from the mouth. The age at which the condition was noticed for the first time was a little uncertain; it seemed to have attracted attention in early childhood, when the patient had been taken to the Children's Hospital, Great Ormond Street. It was, however, possible that the condition had really existed from birth. As certain appearances suggested congenital syphilis, it was considered possible that treatment on these lines might improve the disease of the tongue.

(3) A case of papular and ringed eruption on the dorsum and side of the right hand of a young girl, aged 16 years. She had come up for treatment a week previously, and the diagnosis of *Granuloma annulare* had been tentatively made from their resemblance to the early lesions in the case of the undoubted example of this disease shown by the exhibitor at a recent meeting of this Society. The papules were itchy, and were white in their early onset, becoming red later, and forming ring-shaped patches with rather indefinite outlines. An ointment of glycerine of subacetate of lead had been ordered to be constantly applied under a bandage. The papules and ring-shaped patch had entirely disappeared with this treatment at the time of the meeting, so that no opinions could be given of the nature of the eruption. This rapid disappearance of lesions was similar to the experience in the case of Granuloma annulare alluded to above, for in this case the lesions had disappeared within a week as the result of applying a bandage over the seat of a small biopsy; when the patient came up to have the stitches of this removed the patch was found to have almost completely vanished beneath the bandage.

Dr. STAINER showed a man, aged 24 years, a clerk in the railway works at Swindon, who had been troubled with a scarring eruption of the face for the last three years. The eruption started with the appearance of deep-seated papules, which gradually developed into pustules, with the result that the whole of the face was covered with small, deeply-pitted scars. The papules appeared in successive crops, and showed no seasonal variations. The patient in other respects

had been in perfect and robust health. The small part played by comedones in the development of the eruption suggested that the patient was suffering from some unusual form of *acneiform dermatitis*.

The Members present were inclined to think that the case was one of Acne vulgaris in which the lesions were more deep seated than usual.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

A MEETING of this Society was held on March 28th, 1906, Dr. H. WALDO, President, in the chair.

The following cases and specimens were exhibited:

Dr. H. G. ADAMSON showed a case of *ringworm of the scalp treated by the X-rays* to illustrate the use of the pastilles of Sabouraud and Noiré. Complete depilation of the whole scalp had been produced by a series of "pastille doses" given at one sitting. The scalp had been divided into five areas by means of a wire frame and lead-foil flaps as described by the exhibitor elsewhere.* Each area had been exposed for from twenty to thirty minutes, using a tube emitting rays of 5–6 Benoist, through which was passed a current of 0·4–0·6 milliampères, with the scalp at a distance of 7 inches and the pastille at 3½ inches from the anticathode. The hair had fallen as usual during the third week, and it was now growing again (ten weeks after exposure), and the scalp was free from stumps.

The exhibitor had found the pastille of Sabouraud a perfectly reliable instrument, provided proper precautions were taken. Other measurements were not reliable for accurate dosage, but they were useful as a guide and they were of scientific interest. The pastille of Sabouraud alone had made it possible to treat ringworm of the scalp by the method of single doses. Some of the pastilles, however, were more sensitive than others, and only those that were obtained from the original makers (Drault, of Paris) were recommended for use, and then only with the "B tint" which accompanied the book, since the "B tint" was apparently not a fixed standard, but was adjusted to each series of pastilles.

* *Lancet*, June 24th, 1905.

Mr. T. J. P. Hartigan showed—(1) a case of *Dermatitis herpetiformis* of one year's duration in a little boy, aged 7 years. When first seen, he presented a figured, erythematous eruption, with bullæ, and distinctly grouped. The skin over the arms was also dry and somewhat eczematous. There was no marked itching. No acute illness had preceded the outbreak. The urine contained a substance which reduced Fehling's solution.

(2) A girl affected with *Dubrier's disease*, which will be published in full in a future issue of this journal.

Dr. Graham Little showed—(1) a case of *Pityriasis rosea* in a boy aged about 10 years, with a synchronous eruption of *Tinea circinata*. The patient had come to St. Mary's Hospital three weeks previously, with a single patch of scaly redness on the neck, which was diagnosed as Tinea circinata, and this opinion was confirmed by the demonstration of mycelium in the scales from this patch. He was given tincture of iodine to paint upon it, and was not seen again for a fortnight, when he came to the hospital with a copious eruption of small pale-red, slightly scaly patches, distributed upon the sides of the chest and abdomen in the typical manner of Pityriasis rosea. In the groins there were, however, several small circinate patches, which had a different appearance than those on the chest, being redder and more raised, and these were apparently patches of Tinea circinata, since a scanty mycelium was found in the scales taken from these positions. They were not found in the pale patches on the upper part of the body. The combination of the two diseases was interesting in view of the opinion long held by the Vienna school, that Pityriasis rosea is a disease caused by a fungus (the *Herpes tonsurans maculosus* of Hebra-Kaposi), and in Kaposi's lectures a figure showing mycelium in the scales of Pityriasis rosea is actually depicted. This case, with its initial patch of scaly redness, appearing a fortnight before the general eruption, and showing the characteristic features of Pityriasis rosea, might well be claimed as an instance of this disease alone, if the finding of mycelium in some of the patches did not negative this view, the more accepted and modern opinion of this disease being that mycelium has not been found by any observers outside the Viennese school.

(2) A case of *Pemphigus neonatorum* in an infant, aged 4 weeks, in

whom the eruption had appeared two weeks after birth. Bullæ the size of a sixpence were seen upon the pubic region, the lower part of the abdomen, and the upper part of the thighs. These soon burst, leaving an excoriated surface, apparently commencing as smaller, clear vesicles without inflammatory areolæ. More recently the mother had infected her fingers in the course of her attendance on the child, and had developed similar lesions upon them. The confinement had not been a difficult one, and no instruments had been used. No source for the infection of the child could be ascertained.

With regard to the source of infection in these cases Dr. ADAMSON remarked that it was a common experience to find that the mother or midwife in attendance was suffering from impetigo or Pediculosis capitis.

(3) A case of *Lupus vulgaris* in an old lady, aged 72 years. She had a patch of ordinary lupus the size of a half-crown upon the left cheek. The advent of lupus at this advanced age was extremely unusual. The oldest age at which Dr. Radcliffe-Crocker describes lupus as commencing, in his experience, is sixty-three. The patient gave the following interesting history: Her husband had died in August of last year of phthisis, after a very long illness, in which she had nursed him. In the previous June she had been stung on the cheek by a gnat, and this patch had developed in the position of the sting, which might possibly have been the point of entry of the tubercle bacilli furnished by the sputum of her husband.

Dr. MEACHEN referred to a similar case under his care of an old lady, about 65 years, who had developed a patch of lupus on the cheek in the course of nursing a son who had died of phthisis. The youth was stated by her to have been in the habit of nestling his face up against her cheek.

(4) A case of *chronic dermatitis* of uncertain character which the exhibitor, after reflection, would class with the group of diseases named by Brocq "parapsoriasis," and with the qualification *en plaques*, indicating the type. The patient was a little girl, aged 12 years, who had had a patch three inches by two on the left thigh for at least a twelvemonth. This was of a very pale pink, approaching the "bistre" tint which Brocq describes in his cases. There was no infiltration and exceedingly little scaling, a most minute branny desquamation being all that was visible. There were no subjective symptoms, and the patch had slowly enlarged, with no attempt at

involution. More recently two much smaller patches had appeared upon the right thigh. There were no patches anywhere else, and the scalp and face were perfectly free. The exhibitor considered cases of this type very uncommon, and he was unwilling to include them in the category of eczema. The distribution upon the limbs to the exclusion of the trunk and head, the frequent attempt at symmetry of arrangement, the extreme chronicity and resistance to treatment all differentiated this type from seborrhoic eczema.

Dr. Norman Meachen exhibited a young man, aged 17 years, with *symmetrical œdema of the upper eyelids*. The patient had been transferred to him from the Ophthalmic Department of the Tottenham Hospital by Mr. R. Phillip Brooks, who reported that there was only a slight degree of hypermetropia present. The upper eyelids had been swollen for at least one year, and the patient thought it might have been very much longer. When first seen the upper eyelids were markedly swollen and reddened, though they did not pit on pressure. The lower lids were unaffected. There was no history of any urticarial lesions or tendency. The hair of the scalp was thin and lustreless, but no seborrhœa was present. The skin over the face was slightly roughened. The urine was normal.

Dr. Stowers considered that the œdema was of a solid type, allied to elephantiasis. He called attention to the thickening of the tissues of the upper lip also present, and remarked that the injection of thiosinamine might prove useful.

Mr. George Pernet showed a microscopical section of a *rodent ulcer*, which he had removed from the forearm of a lady (a private patient). According to the patient's statement it had developed upon a mole.

Dr. Edward Stainer showed a case of *Urticaria pigmentosa* in an infant, aged 6 months. Typical urticarial lesions commenced in the usual way, and left pigmented spots over the back and chest. The condition was of about three weeks' duration. The child had been breast-fed.

CURRENT LITERATURE.

SOME TROPICAL SKIN DISEASES. Henggeler. (*Monats. f. prakt. Derm.*, March 1st, 1905, p. 236.)

During a stay of seven years in Sumatra the writer saw numerous cases of leprosy, framboesia tropicalis, tinea imbricata, and "panu," in addition to diseases

which are more common in Europe. In this paper he deals more especially with frambœsia tropicalis, and from the number of cases which came under his observation chooses three, giving their clinical history, some histological findings, and reproductions of several excellent photographs of the patients' lesions. In Sumatra the disease, also known as yaws, is extremely common, as also is variola, but vaccination has now somewhat limited the spread of the latter. Against yaws no method of inoculation is known, and practically every child contracts it; in fact, the disease is thought by the natives to free the system from deleterious matter, and in Lagos the greeting amongst friends "Your health!" is converted into "May the yaws visit your family!"

In those districts where yaws is endemic it is essentially a children's disease, and the disease is rarely, if ever, transmitted sexually. Whereas syphilis chiefly affects adults and enters the system mostly by the genital organs, this is not the case with yaws. In contra-distinction with the morphologically similar eruption of yaws, the polymorphic characters of the syphilis eruption are usually marked. In yaws the hair does not fall out, there is no involvement of the eyes, mucous membranes, and internal organs, nor of the nervous system; the prognosis *quoad vitam* is favourable, and the disease is cured without leaving any traces unless secondary infection of the nodules occurs. It is well known that in syphilis the course of the disease is almost exactly the opposite. Lymphadenitis in yaws is local, and the enlarged glands are painful; in syphilis there is universal lymphadenitis, and the glands are indolent. The patient with yaws complains, at any rate at first, markedly of itching; in syphilis this does not occur. The primary eruption of yaws never resembles an *ulcus durum*, but resembles in appearance the later lesions. In syphilis the frambœsiform variety is rare. Yaws does not much affect the general health and can undergo spontaneous cure, but is not transmitted to the offspring, while late symptoms are in yaws distinctly rare. These characteristics are exactly opposed to those of syphilis. The distinction between yaws and syphilis is shown also by Charlouis' successful inoculation of syphilities with yaws and *vice versâ*, and by the occurrence of auto-inoculation in yaws and its absence as a rule in syphilis. One attack of yaws should give no immunity against a second attack; there is, at any rate, no absolute immunity.

Histological examination shows the vessel-walls to be intact, but the lumen of the vessels enlarged and the lymph-spaces dilated; the contrary is the case in syphilis. The giant cells, hyaline, and colloid degenerations of syphilis are not found in yaws, nor is degeneration or necrosis of connective tissue. The type of the plasma-cell is in yaws better adhered to than in any other form of granuloma. These distinctions between yaws and syphilis are directly opposed to the theories both of Hutchinson and Scheube.

The late symptoms of yaws described by de Boissiere are given in detail, but Henggeler states that neither he nor Charlouis have seen such symptoms, and he adds that definite, clear observations, and accurate histological examinations are necessary if their existence is to be accepted. In some cases syphilitic manifestations seem to have been described as due to yaws.

Frambœsia must nowadays be looked upon as an infectious disease, due to a definite micro-organism which has so far escaped recognition. Sections do not show any conclusive appearances with respect to organisms.

Therapeutics must be largely preventive, and deal with the care of the skin and

the houses. In districts like Trinidad, where the disease is endemic, the patients should be isolated and clothes, etc., disinfected or burnt. Where frambœsia has broken out the natives wait until the general eruption has fully developed before adopting therapeutic measures. At first the patient has only to bathe in the river a few times a day, and his diet is altered inasmuch as he is prohibited meat, fish, and certain vegetables. Later on he gets aperient drinks, and the nodules are powdered with a mixture of copper sulphate and water. Arsenic has no effect, mercury little, but iodide seems to do good. The prevention of a general eruption by excision of the primary lesion (Gewand) may be met by the objection that the latter is very difficult of recognition, and it may not have been yaws from which the patient was saved.

J. L. B.

SOME OF THE USES OF OXIDISED PYROGALLIC ACID (PYRALOXIN) IN DERMATOLOGY. W. Allan Jamieson. (*Edin. Med. Journ.*, May, 1905.)

Pyraloxin is pyrogallic acid modified by exposure to a current of air in presence of ammonia vapour. It is a brownish-black substance which was found by Unna to possess no toxic properties, nor liable, as a rule, to produce dermatitis having passed from the keratolytic into the keratoplastic class.

Unna recommended it in psoriasis, leprosy, and, compounded into a plaster-muslin with oxide of zinc, in Lupus erythematosus. Jamieson has used it successfully in numerous cases of Eczema palmaris; in a case recorded *in extenso* the application employed was glycerine of starch 1 oz., resorcin 15 grs., pyraloxin 15 grs.

In the treatment of psoriasis it stands next to chrysarobin in efficiency, and in some instances exceeds it in value; here the prescription recommended is pyraloxin ½ drm., vaseline to 1 oz., with salicylic acid 10 grs. as a mordant; or in extensive cases 10 parts are dissolved in 20 of benzol and 80 of acetone, applied as a varnish every one or two days. In indolent cases replace 5 parts of pyraloxin with 5 parts of pix carbonis or pix liquida. These solutions are also valuable in Lichen planus. Pyraloxin may also be helpful in Lupus erythematosus prescribed in a paste, as follows: oxide of zinc 10, kaolin 2, pyroxalin 5, vaseline 28. It is also very successful in certain cases of eczema—especially infantile eczema of the face after the acute stage is passed—but in other cases may cause aggravation.

In persistent staphylogenic sycosis, recrudescence after X-ray depilation may apparently be averted by its use. Encouraging results were also met with in a case of ringworm (microsporon), where Jamieson used the following formula; pyraloxin 10 grs, precip. sulphur ½ drm., ammon. mercury 15 gr., vaseline 1 oz.

G. S.

TUBERCULIN AS AN AID TO DIAGNOSIS AND TREATMENT. R. Cranston Low. (*Scot. Med. Journ.*, May, 1905.)

Ever since its discovery by Koch, fifteen years ago, Neisser has constantly used tuberculin in the Breslau University Skin Clinic. The tuberculin employed is Koch's original preparation ("old tuberculin"), a glycerine extract of pure cultures of tubercle bacilli which have been killed by heat, its active principle being the extra-cellular toxines. (The newer preparation, "T. R.," containing

the intra-cellular toxines as well, has also been tried, but is not so reliable.) The injection of tuberculin produces a local and a general reaction. The former consists of an acute inflammation in the diseased part; if it be tubercular, it varies in degree from mere redness and swelling to actual necrosis, and, occurring within a few hours, usually subsides within two days. The general reaction (fever, malaise, etc.) is of less diagnostic importance; it may occur slightly in even healthy persons. The two reactions are usually more or less simultaneous. Neisser uses tuberculin as a routine practice for both diagnosis and treatment, unless otherwise contra-indicated. If the lungs be affected, it must be given with caution, if much affected not at all, for fear of breaking down the tuberculous focus and setting up general tuberculosis (this calamity has never happened in Neisser's clinic).

Pure tuberculin is a clear brown fluid, which keeps without decomposing. Just before use the correct dose is diluted up to 1 c.c. with distilled water, containing 25 per cent. carbolic acid, and which has been sterilised by heating to 130° C. for two hours. The site of injection is the interscapular region. For diagnostic purposes the dose is $\frac{1}{10}$ mgm., followed at intervals of forty-eight hours by $\frac{1}{2}$, 1, 5, and 10 mgm. as a maximum, stopping, of course, before if a reaction is obtained. In children, and in adults with the slightest suspicious lung trouble, begin with $\frac{1}{100}$ mgm. In no case is it necessary to go begond 10 mgm., as, if a case is tuberculous, it will react after such a dose (as a rule Lupus reacts after 1 mgm.). The intervals of injection must not be more than forty-eight hours, otherwise a tolerance may be produced. Some local redness and swelling may occur at the seat of injection, which may recur on repeating the injection elsewhere. (Klingmüller has found typical giant-cell tubercle nodules at the seat of the previous injection.) The local reaction is not very difficult to recognise unless there be a well-marked general reaction, with much hyperæmia of the skin. The zone of redness around the lesion is due to macroscopically invisible nodules with giant-cells, but apparently no bacilli. Treatment, therefore, must extend as far as the reaction zone reaches. Other unsuspected foci of disease may be similarly exposed (as Lupus in the nose).

The use of tuberculin may be followed by the appearance of the so-called "tuberculin exanthem," which may be macular (then generally scarlatiniform), hæmorrhagic, urticarial, or papular; it is never seen except in tuberculous patients. The papular form resembles Lichen scrofulosorum, and may fade or persist. The local reaction occurs in Lupus, Lichen scrofulosorum, Bazin's disease, scrofuloderma, and all tuberculides; doubtful reactions may be observed in leprosy, actinomycosis, etc.; syphilitic lesions will not react. If the local reaction be doubtful, the lesion is probably not tuberculous. Reaction does not occur in Lupus erythematosus, but may do so in the so-called "Lupus erythematoides." As has been said before, the general reaction is unimportant; it may depend upon internal tuberculosis. Different individuals have different susceptibilities. Neisser asserts that whenever a typical local reaction occurs the lesion is tuberculous, when (after suitable doses of tuberculin) absent, non-tuberculous. Tuberculin is not as successful in treatment as in diagnosis. Repeated injections may remove the infiltration of Lupus; the dose here is $\frac{1}{10}$ mgm., which is only very gradually increased. Röntgen rays or Finsen light may be employed at the same time. Tuberculin may be advantageously

administered to see if a case of supposed cure of Lupus is really complete. Tuberculin is capable of completely curing Lichen scrofulosorum.

(Clinical notes of five illustrative cases and two photographs are interspersed in Dr. Low's paper.) G. S.

ON THE TREATMENT OF CHILBLAINS. By Drs. Max Joseph and H. Vieth. (*Derm. Centralb.*, March, 1905, p. 162.)

Chilblains are often peculiarly refractory to treatment. The anæmic appearance of many of the patients affected shows that the general health should not be neglected; on the other hand, the large number of external methods employed points to the conclusion that a cure is not always easily obtained.

The authors found calcar. chlorat. 1·0, ung. paraffini 9·0, recommended by Binz, useful in many cases. In other cases they were successful with Salzwedel's alcohol dressings. After the method of Lentz, they leave an alcohol dressing on the hands every evening, and remove it in the morning. According to Salzwedel's directions the parts to be treated are covered with several layers of gauze soaked in alcohol and over this a perforated piece of water-tight material is spread, the whole being secured with a bandage. In many difficult cases, however, this treatment has been superseded by the application of bromocoll in the form of balsam and sticks. Good results have also been seen from epicarin, *e.g.* Epicarin 3·0, sap. virid. 0·5, ung. caseini ad. 30·0. There still remains a large number of cases in which the patients are not relieved; and in these cases the authors have employed resorcin, which has for a long time had a good reputation for the treatment of chilblains. Its action is shown in the contraction of the vessels, producing a strengthening and hardening of the epidermis, which in its turn exerts a mechanical pressure on the underlying tissues and thereby contributes to the removal of the hyperæmia. Other agents, such as ichthyol and iodine, act in a similar manner. There is no known medicament which compares with resorcin in this particular hardening effect on the epidermis.

The authors have endeavoured to strengthen its action, and think they have attained this object by using the monoacetyl derivative of resorcin, which has been employed by one of them for many years and introduced into dermatology under the name of euresol. Euresol is not a crystalline substance like resorcin, but is of a liquid consistency and, consequently, penetrates the skin more easily, so that a deeper action can be obtained. They have made a series of experiments on animals in order to test its toxicity. With external application neither the hardening action nor irritation were observed in the skin or other organs. The urine also remained normal. Internal administration in large doses produced the results which were also noticed with resorcin, but it appeared to be somewhat less toxic. Applied externally, in human subjects, irritation was never seen. At first euresol was used in spirituous solution or in collodion; subsequently eucalyptol was added to increase its antipruritic power, and turpentine was also added, according to the following prescription: Euresol, eucalyptol, ol. terebinth āā 2·0, collodion ad. 20·0.

A euresol soap is also prescribed as follows: Euresol, eucalyptol, ol. terebinth, lanolin, āā 2·0, sapo ung. 20·0. This is best dispensed in tubes. It is not advisable to dispense it in a box as the air has a deleterious action upon it. The

euresol-frostseife has a red colour and becomes somewhat darker without the efficiency of the preparation being changed. It may be combined with other ointment bases, such as benzoated zinc ointment or lanolin, also with Unna's gelanthum and unguentum caseini.

The writers have treated a considerable number of patients with the chilblain soap and are pleased with the results; especially was this the case in an intelligent patient, who had gone through the whole gamut of the numerous methods of treatment, and who was able in consequence to form a trustworthy opinion of its merits. They have as yet not had sufficient experience as regards the prevention of relapses, since the method was only tried during the winter of the present year.

S. E. D.

TO THE KNOWLEDGE OF URTICARIA XANTHELASMOIDEA.

G. Nobl. (*Archiv f. Derm. u. Syph.*, May, 1905, p. 73, and June, 1905, p. 163.)

After discussing the history of this peculiar skin affection and referring to the earlier descriptions of cases of it with which the names of Tilbury and Colcott Fox are so closely associated, the writer describes a characteristic case of the disease which recently came under his care. The patient was a Viennese boy, aged $2\frac{1}{2}$ years. At birth and during the first week his skin had appeared to be perfectly healthy. About a fortnight after birth intertriginous lesions developed in the gluteal folds, and soon after that the earliest sign of the Urticaria xanthelasmoidea made its appearance in the middle of the breast in the form of brownish-red flat papules of about the diameter of a split-pea. Lesions of a similar type gradually developed over the trunk and limbs, the skin between them being apparently unaffected. At first there was no indication that the lesions were itchy, and the mother did not notice that they were preceded by wheals or that the child provoked them by scratching. A typical lesion was excised for microscopical examination, and revealed the well-known characteristics in its histology. The most conspicuous features were, first, the presence of a dense deposit of melanin between the cells of the basal layer and the deeper rows of cells of the Malpighian layer, and also to a less extent in the spaces beween the collagen bundles in the papillary and sub-papillary layers of the corium; and, second, the infiltration of Ehrlich's mast-cells in a diffuse sheet in the upper layers of the corium. Where the pigment was most profuse the mast-cells were in greatest number, and the writer considered that there was a definite relation between the pigment and the mast-cell proliferation. The arrangement of the mast-cells in a more or less diffuse sheet and not markedly grouped around blood-vessels and the general appearance of the corium suggested to the writer that the affection was not an inflammatory disturbance, nor did he regard the formation of a wheal as an essential precursor of the pigmented lesion. He did not, however, venture to give an explanation of the pathogenesis of the eruption except to state that it was the result of some unknown "formative irritant" which acted first in early extra-uterine life. The paper is illustrated by a photograph of the patient and coloured drawings of the histology of the lesion excised.

J. M. H. M.

ERYTHEMA INDURATUM (BAZIN). Fr. Hirsch. (*Archiv f. Derm. u. Syph.*, May, 1905, p. 56; June, p. 181.)

In this contribution the writer first describes a case of Erythema induratum which came under his observation at the hospital at Frankfurt. It was a characteristic example of the disease and occurred in a young woman, aged 16 years. She suffered also from scrofulous glands and phlyctenular conjunctivitis. A histological examination of a lesion did not, however, give any definite indication that it was tubercular, and no tubercle bacilli were found. The vessels did not present the thickening of their walls which has been described repeatedly in this connection, but there was the same deep-seated cellular deposit which is so typical of the histology of the disease.

Six cases from the practices of Drs. Herxheimer and Sachs are then briefly described. All the patients were women and varied in ages from 19 to 31 years. The first patient died of phthisis; the second suffered from a severe and suspicious cough; the third was phthisical and her mother died of phthisis; the fourth patient was phthisical, and presented lesions of Lupus erythematosus on the face; the fifth patient had scrofulous glands and tubercular joints; the sixth patient was the only one in which concomitant tubercular manifestations were absent.

Though the histology of the cases which the writer examined was so indefinite, he still concluded that the affection was a tubercular disease.

A careful summary of the literature follows in which about 80 cases have been collected and epitomised. Out of these only 11 occurred in men. The ages of the patients varied between twelve and sixty-eight. There were 18 under twenty, 18 between twenty and thirty, 11 between thirty and forty, 5 between forty and fifty, 1 between fifty and sixty, and 1 at sixty-eight. In 12 cases there was a history of tuberculosis in the family, and in 30 cases the patient was either definitely tubercular or suffered from some type of tuberculide such as Lupus erythematosus or folliclis. In most cases the legs were affected, in a few the arms also, and in 5 the face was involved.

(The most valuable features of this elaborate paper are the summary of the literature on the subject and the bibliography, but the histological description of the writer's case is atypical, and the tendency to place Lupus erythematosus in the tuberculide group in the present state of our knowledge is much to be deprecated.)

J. M. H. M.

PSOROSPERMOSIS FOLLICULARIS VEGETANS (DARIER). J. Bukovsky. (*Archiv f. Derm. u. Syph.*, June, 1905, p. 279.)

After discussing the literature on this somewhat rare skin affection, the writer describes a case which occurred in Professor Janovsky's clinique at Prague. Though the case did not conform in every detail to Darier's original description, still, it had a sufficient number of characteristics in common with it to warrant its inclusion under the heading of Darier's disease. The patient was a man, aged 24 years, and the classical situations on his skin were involved, namely, the axillæ, umbilicus, scalp, and face, the genital region in this case being exempt from the eruption. The initial lesion consisted of scaly papules which gradually became warty. Histologically these lesions presented changes which were con-

fined to the epidermis, where cornification was defective, the granular layer and keratohyalin being absent, and there was a marked proliferation of the prickle-cell layer. Certain of the lesions, however, presented both macroscopically and microscopically definite inflammatory changes which did not form a feature of Darier's cases. The inflammation was evident clinically by the occurrence of inflammatory papules and vesicles, which after breaking showed no tendency to keratosis but took on warty changes. Under treatment by arsenic some improvement took place, but recovery was incomplete.

J. M. H. M.

ON THE ETIOLOGY OF THE SO-CALLED SPONTANEOUS OR MULIPLE SPONTANEOUS, OR NEUROTIC AND HYSTERICAL GANGRENE, BASED ON FIVE CASES. S. Róna. (*Archiv f. Derm. u. Syph.*, June, 1905, p. 257.)

In 1900 the writer described in the above journal a case which he placed under the heading of "Herpes Zoster Gangrænosus Hystericus" (Kaposi). Since then four similar cases, the notes of which are given in this contribution, have come under his observation. From a study of these cases he came to the following conclusions:

(1) That the disease named by Kaposi "Herpes zoster gangrænosus hystericus" is not distinguishable from "spontaneous multiple neurotic gangrene."

(2) That the lesions of this disease only occur in hysterical individuals and malingerers, and are artificially produced by some form of caustic.

(3) That the lesions are self-inflicted, and are not nervous phenonema.

(4) That the differences which occur in the morphology and histology of the lesions in different individuals are the result of the employment of different chemical irritants, of different degrees of concentration of the caustic, of differences in the length of time during which it is applied, and of differences in the irritability of the skin in different individuals.

J. M. H. M.

LICHEN PLANUS ZONIFORMIS. Felix Pinkus. (*Derm. Zeitschr.*, April, 1905, p. 216.)

Dr. Pinkus here records the case of a man, aged 31 years, in whom an eruption of Lichen planus papules appeared on a limited area, namely the right shoulder and pectoral region and the right side of the neck. He endeavours to discover if the distribution can be referred to any of the anatomical features of the skin, such as the lines of cleavage, the lines of hair-insertion, the nerve areas. He concludes that the area affected corresponds to the terminal anastomosing branches from the 4th and from the 9th and 10th spinal segments—*i.e.* the cervical cutaneous, the supraclavicular, and the anterior cutaneous branches of the 1st and 2nd intercostal nerves.

W. B. W.

MICRO-CHEMICAL HISTOLOGICAL METHOD FOR THE DETERMINATION OF ARSENIC IN THE TISSUES. J. Justus. (*Derm. Zeitschr.*, May, 1905, p. 277.)

The author endeavoured to apply the results of his work dealing with the estimation of mercury in the tissues to arsenic as well.

He found that by first poisoning an animal with arsenic and then subjecting the tissues to the action of sulphureted hydrogen, a yellow precipitate of AS_2S_3 could be produced, provided that the tissue was kept soaking in the H_2S in the warm (70–80°) for several days. His method was as follows:

(1) Fixation in 4 per cent. formalin, 1–2 days.

(2) Wash with water. Then soak in neutral H_2S solution at 70–80° for 3 to 4 days.

(3) Wash in water. Then soak in increasing percentages of alcohol.

(4) Imbed in celloidin. Cut sections.

(5) Soak the sections from 10 to 20 minutes in 5–10 per cent. HCl solution to get rid of the sulphide of iron. Wash in running water.

(6) Stain. Clear with carbol-xylol. Mount in balsam.

His conclusions are that the arsenic enters the blood-stream and enters into combination with the plasma of the erythrocytes. It enters all the organs, whose cells take it up, so far as can be judged, without distinction. The arsenic is found in the greatest amount in skin, kidneys, liver, bowel—organs concerned with its excretion. The nuclei are free, the poison combining with the plasma of the cell. In the kidney and intestinal epithelium the precipitate is exceedingly fine, larger in the muscle-cells and very coarse in liver, coil-glands, horn-sheath, and hairs.

W. B. W.

THE MANAGEMENT OF SWEATING FEET IN THE (GERMAN) ARMY. Fischer. (*Münch. med. Wochenschr.*, May 16th, 1905, p. 945.)

Formalin has almost entirely replaced the salicylic-talc and the chromic acid solutions formerly so much used. The author mentions the objections to the use of strong formalin, and gives it as his experience that ointment preparations are not convenient in this condition. He prefers formalin incorporated in a powder, and strongly recommends a combination of formalin with vasenol powder, which he says is cheap and pleasant to apply. The powder is given to the men in dusting boxes, containing 100 gr., the strength of the preparation varying from 5 to 10 per cent. according to the severity of the case. Whenever possible the feet are first cleansed and hardened with dilute alcohol containing 1 per cent. of salicylic acid. The powder is then well rubbed in, particular care being taken to treat the skin between the toes. The men are recommended not to wash their feet, and according to the writer, washing is quite unnecessary and often harmful.

The author objects strongly to the use of felt soles for lining the boots. He, however, holds that soles made of paste-board, blotting-paper, straw, asbestos, etc., may be usefully employed. They can be thoroughly impregnated with the formalin powder or soaked in formalin solution.

W. B. W.

THE CURE OF ACNE BY MEANS OF A NEW SCAR-FREE OPERATION. Prof. Kromayer (*Münch. med. Wochenschr.*, May 16th, 1905, p. 942.)

Prof. Kromayer has made use of the rotation machine employed by dentists to work small cylinder-knives with which he "punches" minute pieces out of the skin. The smallest cylinder has a diameter of 0·7 mm. and they increase by

regular stages up to 1·2 mm. He now describes his method of employing them for the cure of acne.

W. B. W.

A NEW METHOD OF LOCAL TREATMENT FOR CARBUNCLES AND FURUNCLES. Albert Marcus. (*Münch. med. Wochenschr.*, May 23rd, 1905, p. 1002.)

Dr. Marcus recommends the use of electrolysis as a means of causing carbuncles and furuncles to abort. When as yet there is no pus-formation, he touches the openings of the follicles in the inflamed area to discover those that are painful. Into these he introduces the negative needle with a stream of 1–2 m.amp. The stream is rapidly increased to about 10 m.amp., and the liberated hydrogen flushes out the follicle. The current is then reversed in order to secure the disinfecting action of the oxygen liberated at that pole. Then finally the current is restored to its original direction in order that the hydrogen may again wash out the follicle.

When pus-formation has already occurred, the author recommends the same procedure, but he says it must be applied twice daily so long as pus continues to form. Such frequent applications make the method inapplicable for ordinary cases.

W. B. W.

PECULIAR FEATURES ENCOUNTERED IN CASES OF LUPUS ERYTHEMATOSUS. W. Bornemann. (*Derm. Zeitschr.*, June, 1905, p. 349.)

Three cases of Lupus erythematosus are recorded, each presenting peculiar features.

The first occurred in a man, aged 58 years, who had had the disease for twenty years. It had been produced at first by an injury to his ears, which were crushed by the swinging to of a carriage door. The ears and nose were the parts affected. The peculiarity of this case was that two papillomata—one as large as a cherry—had formed on the right ear, and in one of them it seemed as if carcinomatous degeneration was commencing.

The second case was peculiar in that there appeared to be a coincidence in one patient of Lupus vulgaris and Lupus erythematosus. The patient, a female aged 28 years, had a patch of Lupus vulgaris on the cheek, whilst on the scalp and ears the disease assumed the form of Lupus erythematosus. The former reacted to tuberculin, whereas the latter did not. The patient also showed doubtful signs at the right apex of the lung. These became acute after the tuberculin injection, but no bacilli were found in the sputum. The histological examination supported the diagnosis. An injection of a portion of the Lupus vulgaris patch into a guinea-pig had no result.

The third case was complicated by a severe attack of erysipelas. The disease had been present some six years in the typical form on the nose and cheeks. The erysipelas caused a great extension of the disease, so that nearly the whole face was affected. It left such a marked œdema of the face that the case seemed one of Erysipelas perstans faciei. The disease was present on the scalp, fingers, and buttocks, and there was an eruption of Lichen scrofulosorum on the trunk. In the following year the patient committed suicide. At the post-mortem examination the internal organs were found to be sound. There were, however,

in the vagina a number of small blue-red elevations, and there can be little doubt that this was an instance of Lupus erythematosus of the vaginal mucous membrane.

W. B. W.

A VESICULAR DERMATITIS CAUSED BY SCILLA MARITIMA AND REMARKS CONCERNING THE MEANING OF RAPHIDES. By Erich Hoffmann. (*Derm. Zeitschr.*, June, 1905, p. 387.)

The author records two cases in which a vesicular inflammation followed the application of parts of the squill plant.

The first, a female, aged 30 years, wishing to hasten the healing of a furuncle on the right hand, applied chopped-up squill leaves. On the following day the part in question felt hot and a great number of small vesicles developed round the boil. These healed in eight days. At a later period this same patient scalded a finger on her left hand with hot fat. To this also she applied the squill leaves, and again after twenty-four hours the same vesicular eruption appeared. The affected skin was slightly swollen, a little reddened, and covered with minute clear vesicles.

The second, also a woman, aged 40 years, had crushed a fresh squill bulb and mixed the pulp with meat to form a poison for rats. Shortly after both hands felt hot, and twenty-four hours later they were swollen, red, and covered with clear vesicles.

The histological investigation showed round and oval vesicles with scrofibrinous contents and a great number of eosinophile leucocytes. The vesicles appear to take their origin in the deep layers of the epidermis. There is an excess of eosinophile cells in the cutis and also in and around the blood-vessels. The author gives good reasons for thinking that the raphides have nothing to do with the irritation.

W. B. W.

A CASE OF BLINDNESS FOLLOWING INJECTIONS OF ATOXYL FOR LICHEN PLANUS. W. Bornemann. (*Münch. med. Wochenschr.*, May 30th, 1905, p. 1043.)

The patient, a female, aged 58 years, was ordered injections of atoxyl for Lichen planus. She received the first injection on July 1st, of ½ c.cm. of a 20 per cent. solution, and had three each week. The dose was increased to 1 c.cm. after three weeks of treatment. At the end of August symptoms of arsenical poisoning appeared, and the treatment was suspended for six days. It was resumed in spite of the fact that unpleasant subjective symptoms were present. In the middle of September vision became impaired. About this time also, by reason of a fresh extension of the skin affection, the dose of the atoxyl had been again increased. In October she was examined by Dr. Weinkauff, who diagnosed an optic neuritis. By December of the same year the patient was completely blind. The author discusses the part played by the constituent parts of the atoxyl molecule, namely, arsenic and anilin. He quotes cases of eye trouble following anilin poisoning, but is unable to say which had acted in this particular case. There was clearly great carelessness in the use of the remedy.

W. B. W.

TWO NEW CASES OF POROKERATOSIS. Mibelli. (*Ann. de Derm. et de Syph.*, June, 1905, p. 503.)

About forty cases, according to Mibelli and by him endorsed as probably authentic, have been published of this rare disease. Several cases recorded as examples he rejects. He now adds two new cases of his own observation. The first of these, a field labourer, aged 66 years, had had the disease since his twenty-fourth year. The parts chiefly affected were the feet, hands, legs, face, scalp, and genito-perineal region. One small lesion was found near the umbilicus, two similar small lesions on the back, and one on the neck. There was no alteration of the buccal mucosa. In the second case, also a field labourer, but a younger man, aged 20 years, there was an extraordinary family history of the disease, the paternal grandfather, father, and paternal uncle, and two of the patient's brothers being similarly affected. The patient had first noticed his lesions at the age of ten on his hands and feet, and afterwards on the face, neck, and scrotum.

Mibelli discusses in great detail the appearances that he regards as typical and proceeds to a description of the histology. In addition to the phenomena of hyperkeratosis, which are not particularly distinctive in this disease, there is an eminently characteristic feature seen in the depressed furrow of the lesion which is clinically so striking. Here there is an exaggerated moisture of the epithelial cells lying upon a site in which the granular layer is deficient; in fact, the process is not a hyperkeratosis, but a para-hyperkeratosis. Later, atrophy takes places in the diseased area, the structures which resist this most successfully being the sweat-glands, which are thus found when the sebaceous glands and the hair-follicles are equally destroyed. In addition to these changes there is a slight infiltration of the corium with mononuclear leucocytes, together with disappearance of the elastic network and a thinning of the collagen bundles. It is probable that this deeper inflammation is the sequel of the hyperkeratosis rather than *vice versâ*. To sum up the histological facts, porokeratosis is therefore a hyperkeratosis with parakeratosis, followed by inflammation of the corium and, finally, by atrophy, the hyperkeratosis having as sites of election the glandular and follicular openings, with special election of the openings of the sweat-ducts.

E. G. L.

LYMPHADENOMATOUS PRURIGO. Dubreuilh. (*Ann. de Derm. et de Syph.*, August, September, 1905, p. 665.)

Dubreuilh cites a number of cases from the literature of the coincidence of lymphatic tumours with intense generalised pruritus without apparent leucocytosis in the majority of the cases recorded; in some of the cases there was an actual eruption of the type of prurigo, in others there was merely intense pruritus without eruption. He now publishes two further personal observations, the first in a man, aged 26 years, who had passed several years in military service in Eastern countries. In 1901 he began to suffer from a general enlargement of glands, from loss of weight, and of muscular strength, and from extreme itching. The glands in the left mediastinum were obviously greatly enlarged also, on percussion. He became bedridden from sheer feebleness about three years after

the beginning of the symptoms. The blood showed a proportion of 1 white to 145 red corpuscles; of the white cells 90·3 per cent. were polynuclears. The patient finally died, with severe haemoptysis, after about five months in hospital. The autopsy showed a large mass of glands at the root of the left lung and adhering to the sternum. The anterior mediastinal glands were also enormously enlarged, being in continuity with enlarged masses above the clavicle. The enlarged glands together weighed 2270 grms. The microscopical examination of the glands showed no trace of normal gland-structure, but large masses of cells in a connective-tissue network, the most numerous cells being lymphocytes; no mast-cells or plasma-cells. The skin was also much altered; in the hypoderm were a number of lymphoid nodules, formed of cells resembling lymphocytes, with a nucleus, round or oval, separated by a very fine reticulum of connective tissue. The sweat-glands were all much altered, the coils dilated, the lumen filled up with cells. Numerous cells were found round the hair-follicles. The blood-vessels showed no changes and the skin was otherwise normal.

The second case, in a man of the same age, was of more rapid development. The symptoms were much the same—general enlargement of glands, with intense itching and progressive wasting and loss of power. In this case there was pronounced leucocytosis, with 91 per cent. polynuclears. The patient had not died when Dubreuilh wrote, but was rapidly sinking.

E. G. L.

GONOCOCCIC WARTS. G. Pagliaro. (*Clin. Dermosif.*, November, 1905, with plate.)

The patient, a woman, aged 56 years, for a year had noticed a vaginal discharge which caused intense pruritus of the parts; recently fleshy masses formed on the labia, having the appearance of normal skin but somewhat whitish in colour; some were sessile, others were pedunculated, the size varying from that of a millet-seed to a lentil. Although most numerous on the labia majora and minora, they were also found at the entrance of the vagina; here they were red, moist, soft, and fimbriated.

On vaginal examination the os uteri was seen to be eroded, the remaining epithelium looking white and giving the impression that it was thickened. A muco-purulent discharge came from the cervix, which under the microscope was found to consist of epithelial cells and a few leucocytes. The skin of the thighs was normal. A few warts sprang from the perineum, where the skin was reddened and corrugated. The inguinal glands were enlarged and also the nuchal glands, but to a less extent. In the hypochondriac region there was a pedunculated growth the size of a lentil, and on the chest two were also seen.

The growths were removed nine times before they finally disappeared, pure phenol having been applied in the intervals. The cervix was scraped and nitrate of silver applied, a douche of permanganate of potash being regularly used.

In the scrapings from the cervix colonies of gonococci were found, and the warts when stained with methyl violet or eosin showed gonococci in the cells of the Malpighian layer.

T. P. B.

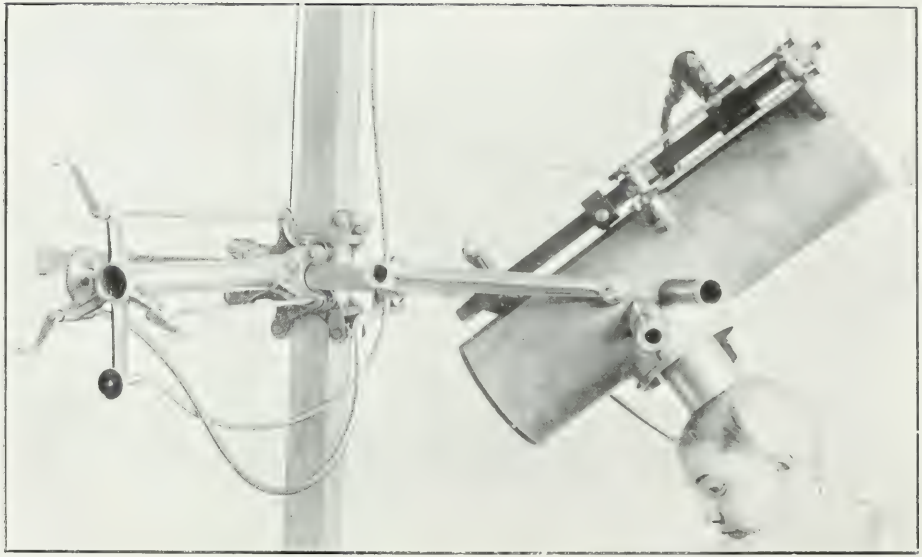


PLATE I.

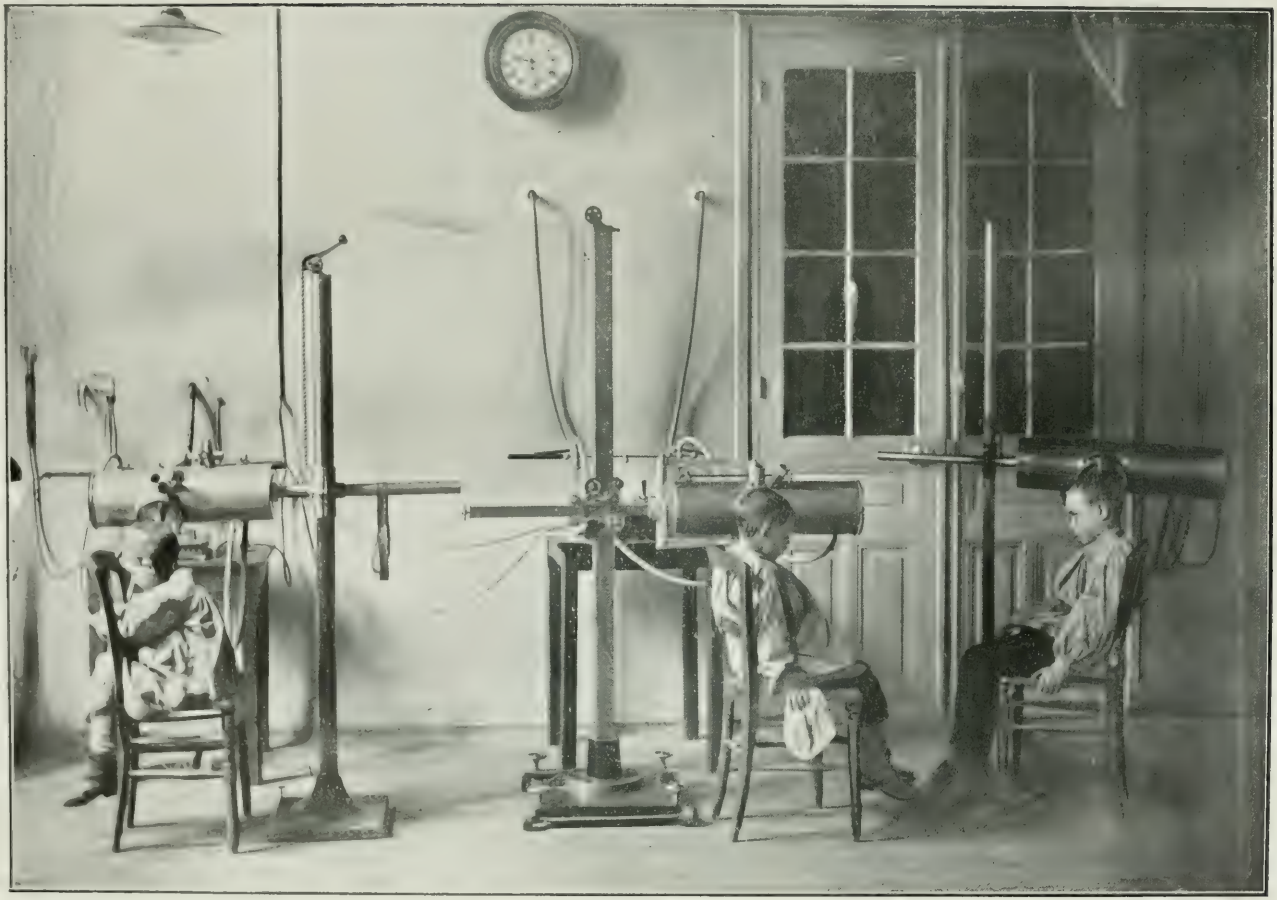


PLATE II.

PLATE III.

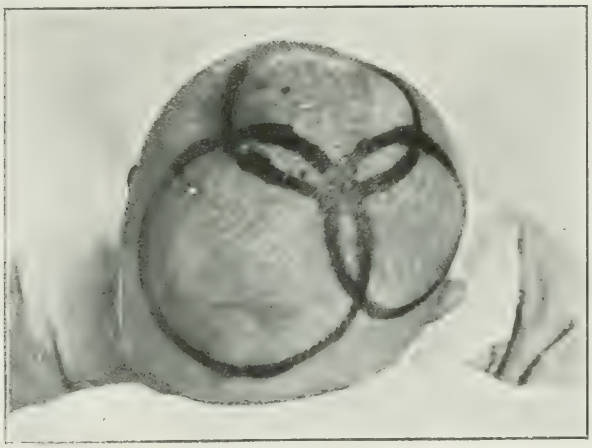


Fig. 1.

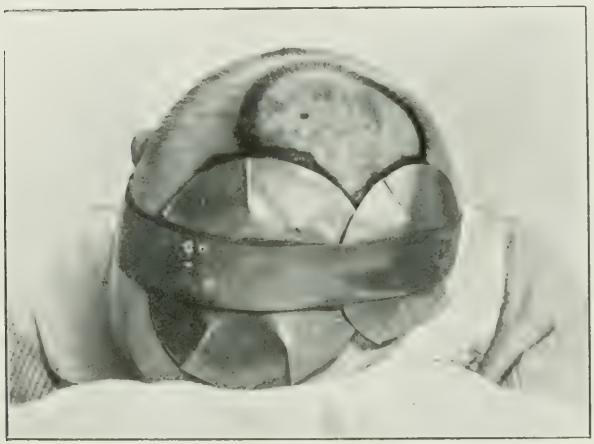


Fig. 2.



Fig. 3.

PLATE IV.

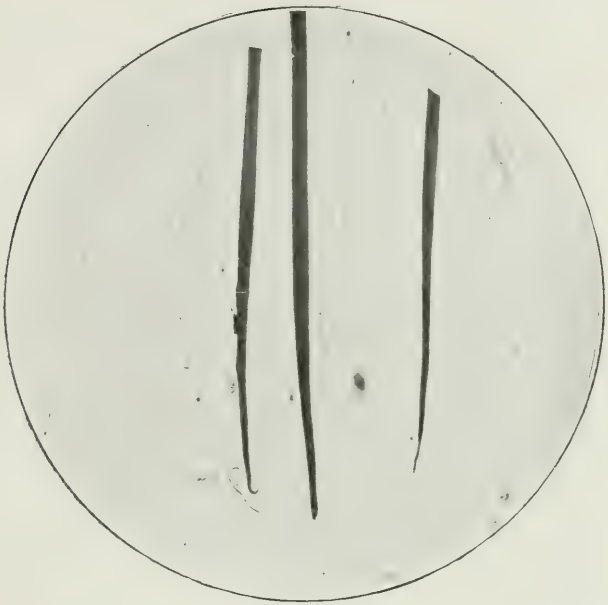


Fig. 1.



Fig. 2.

THE BRITISH

JOURNAL OF DERMATOLOGY.

JUNE, 1906.

THE RADIO-THERAPEUTICS OF RINGWORM AT THE MUNICIPAL LABORATORY OF THE CITY OF PARIS AT THE HOSPITAL OF ST. LOUIS.

The Oration delivered at the Annual Meeting of the Dermatological Society of Great Britain and Ireland, May 23rd, 1906.

By Dr. R. SABOURAUD,

Chief of the Municipal Laboratory, l'Hôpital Saint-Louis, Paris.

Gentlemen,—This is not the first time that I have had the very great honour of speaking before an English medical public. The first time that I spoke in London was in 1896, at the Third International Congress of Dermatology, and even then I had occasion to speak of ringworm. I brought forward then the results of five years of experimental study of this question, in the form of 200 cultures, differentiating some fifteen species of moulds. To-day I have the great pleasure to come before you again with the same subject, and to tell you the decisive therapeutic results which we have obtained during the past three years in the cure of ringworm by radio-therapeutics.

History of the Question and Preliminary Researches.

From 1896 the future therapeutics of ringworm could be foreseen with almost mechanical precision, as events have proved. One could even at that time write that "no medication would cure ringworm because the root of the hair is inaccessible to external antiseptics."*

* Sabouraud, "Étude clinique et expérimentale sur les origines de la Pelade." *Ann. de Derm. et de Syph.*

What it was necessary to find was a means of suspending temporarily, on the whole or a desired part of the scalp, the functions of the papillæ which give birth to the hair—to produce thus the cessation of growth of hairs, if one can put it so, and as a consequence their spontaneous and complete epilation and the eviction of the parasites which they contain. And after a time there should be a new and healthy growth of hair. With this precise object in view, the Municipal Laboratory of the Hospital of St. Louis at first investigated a microbic toxine capable of causing patches of a transient alopecia. The result was unsatisfactory because these injections of toxine did not induce depilation at the point of inoculation, but at a distance. These fruitless efforts lasted for two years. Thereafter attempts were made to utilise, with the same object in view, the depilation caused by acetate of thallium, a toxic phenomenon the frequency of which had been shown by some unsought-for therapeutic results. By applying to the scalp of children an ointment of acetate of thallium, it was possible to cause, in five cases of ringworm, a complete alopecia, the treatment removing both diseased and healthy hair, and causing a complete baldness, followed by the perfect regrowth of healthy hair (1901).

Unfortunately, to induce with any certainty depilation by this means it is necessary to use doses of acetate of thallium capable of causing, in certain patients, grave accidents, such as tachycardia, albuminuria, purpura, etc., and it was necessary to stop these trials without their having afforded what had been hoped from them, but their initial results already justified the scope and direction of our researches. The long-desired solution of this problem was afforded by radio-therapeutics. In 1896, at a time when Freund, of Vienna, was trying radio-therapeutics on all the diseases of the skin in succession, including ringworm, we observed the first case of alopecia from X-rays in a young girl who had remained for several hours exposed to an X-ray tube as the subject of a public demonstration at a music-hall. I watched the course of this alopecia, which denuded the whole of the occipital segment of the head, and was followed four months later by a complete regrowth of hair. At that time, however, we were following out our researches on toxines producing alopecia and on acetate of thallium, and these had not yet been shown to be futile, so that when we commenced to study the application of X-rays for the cure of ringworm numerous partial attempts had

already been made in this method. Even in Paris, not to speak of foreign countries where many similar researches had been undertaken, Oudin, Barthélemy, Gastou, Vieira, Nicoulau, Brocq, Bisserié, and Belot were trying radio-therapeutics in ringworm. All these observers in France and abroad obtained by this method some cures, either partial or complete, *but all of them by repeated exposures of the same area.* I insist upon this fact as of supreme importance, for it in itself deprived radio-therapeutics of all practical value in the treatment of ringworm. Indeed, how was it possible in a treatment applied to hundreds of cases to keep account of the number of exposures made upon any particular part of the head of each child? How was it possible to identify the exact spot in numerous treatments, and each time with an interval of several days? Moreover, no dosage was possible at these exposures; either the X-rays were applied for too long a time and a dermatitis resulted, with the subsequent absence of regrowth of hair, or the application was inadequate, and was followed by depilation, but incomplete cure. Besides the fact that these results were uncertain, excessive, incomplete, and accuracy of dosage unattainable, and the lack of instruments, and especially of localisers, which we were the first to have made, brought about the diffusion of the X-rays in parts where their action was mischievous and undesired. To put it briefly, our own share in this matter has been to focus the question and to invent special appliances necessary for the radio-therapeutics of the scalp in ringworm, and more especially to measure, and to give to all the means of measuring, the sum total of X-rays used, so that for each part of the head one single application of X-rays was sufficient for cure. We shall see further on the practical results which have followed from these discoveries.

Description of Apparatus and Technique.

If you will allow me, gentlemen, I will now describe the apparatus and technical methods which we use. The Municipal Laboratory of the Hospital of St. Louis at present has three similar forms of apparatus, two of which at least are in perpetual use. Each is connected by a simple switch (1) with the constant current of the hospital. The current passes first through a rheostat (2) with the object of bringing about gradually the working of a dynamo (3) and of producing a

magnetic field necessary for its rotation without producing an electric shock sufficient to burn the wire. This dynamo of ¾ horse-power works a static machine with 12 discs (4) of 75 centimetres diameter, with a speed of 950 revolutions a minute. The current of high tension thus produced is picked up by the combs and the condensers of the static machine and is transmitted by two conducting wires well insulated to the two poles (7) of the tube. In the circuit of these

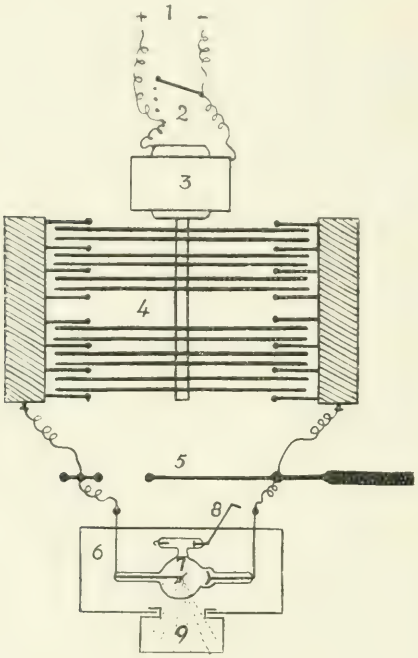


FIG. 1.—Diagram of the apparatus for the treatment of ringworm by the X-rays. 1. Electrical current. 2. Rheostat. 3. Dynamo. 4. Static machine. 5. Spintermetre. 6. Metal protecting case for the X-ray tube. 7. X-ray tube. 8. Regulator. 8. Localiser.

conductors there is interposed a spinter-metre (5), short-circuited, a kind of ball electrode, the separation of which measures the spark in centimetres and the resistance inside the tube to the current which traverses it. All tubes for X-ray work, the vacuum of which is effected by hydrogen, show the peculiarity that the passage of X-rays rarifies the traces of hydrogen which remain in them, and which facilitate, by the conductivity of this gas, the passage of the current. Therefore, in order that the output of X-rays should

remain constant in the tube, it is necessary to restore continually the traces of hydrogen which its working causes to disappear. The tube which we have had made by Messrs. Müller and Drisler to our drawings is a self-regulating tube, small, and with very thin glass.

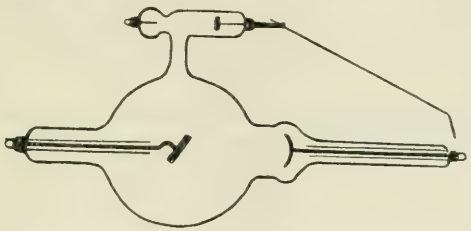


Fig. 2.—Special Müller tube. Bulb 8 centimetres in diameter.

As regards the thinness of the glass, since glass opposes a considerable obstacle to the passage of X-rays, its thinness is indispensable to the good working of the tube. As regards the small diameter (8 centimetres) of the tube, the smaller the tube the more restricted will be the surface which the cone of X-rays will have to pass in its exit, and the less dispersion will they undergo. Further, the large tubes constitute, with their metallic incasement of which I shall speak by-and-by, a larger electro-static field, and one therefore affording a further source of loss of current. Finally, the large tube is more likely to be broken by the discharges which take place between it and its incasement as the tube is closer to its incasement when it is large. As regards the self-regulator in the tube the apparatus of Müller is very ingenious.

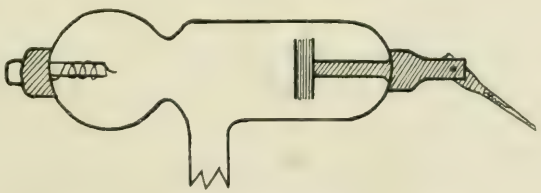


Fig. 3.—Auto-regulator of the X-ray tube.

When the tube becomes hard and the current finds a greater resistance than it can traverse it passes by the medium of a movable branch into a diverticulum of the tube, the electrode of which is made of discs of mica clamped between two screws. When the vacuum with hydrogen has been made in such a tube there remains a thin layer of hydrogen adhering to each disc of mica; slowly, little by little, the

current in passing heats, dilates, and detaches the little bubbles which constitute this adherent atmosphere, and restores to the tube the minimum quantity of free hydrogen necessary for its working. Thus, with a tube equipped with this apparatus, the continuity of its working is assured. Our tubes are surrounded at a distance of 3 centimetres from their wall by an incasement, or lantern, or shield (Fig. 1 [6]), in strong sheet-iron lined on its inside by a thick layer of insulating ebonite. This covering is open to the tube on the side which does not give out X-rays. On the other side opposite the point of emergence of X-rays this covering is pierced by a hole to which is adapted, by a bayonet catch, the whole series of our localisers. These localisers, which now are of universal use, have come (or at least I be-

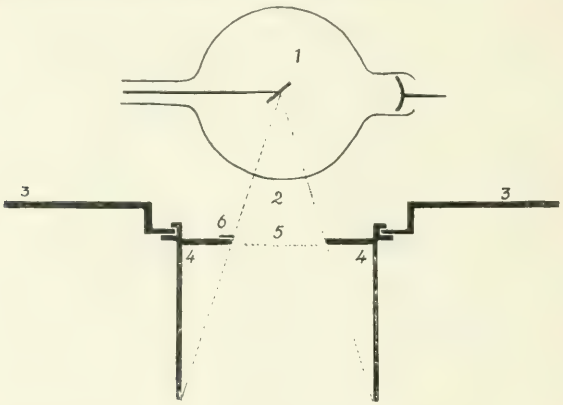


Fig. 4.

lieve so) from our laboratory, and the first were made to our drawings. They are metallic cylinders, all of the same length, but with different diameters; their variation in size is necessitated by the variable dimensions of the patches on the scalp which it is desired to expose to X-rays. Their impermeable walls protect from oblique, diffuse, or aberrant rays the operator and the parts of the scalp in juxtaposition to that which is being treated.

The length of the localisers is the same in all, and so arranged that the skin closely applied to the external orifice of each is exactly fifteen centimetres from the anticathode (Plate I).

Since making our localisers in metal we have had others constructed of lead-glass which we have tried but which we do not use in hospital as being too fragile. Such is, briefly summed up, the arrangement of

our radio-therapeutic apparatus for the treatment of ringworm since the year 1903.

And now with these instruments what is the time of exposure necessary to produce depilation? This question is worth stopping to consider, for the time of exposure is even to-day calculated in terms of minutes by certain operators, and this is really an anachronism. Just suppose that instead of a source of X-rays we have to do with a source of light. In this case, not one, but three factors will determine the results—first its intensity, then its distance, and lastly the time of exposure. The same is necessarily true for X-rays. The distance at which we allow them to act remains constant, namely 15 centimetres. Since all our localisers have the same length, it remains to determine the intensity of the source, and it is not to be forgotten that it is this which will decide the duration of the exposure. Now, nothing is less constant than a current of high tension, whatever may be its origin, whether transformer, static machine, or coil. With no matter what apparatus the current will be stronger or weaker from one day to another, and even in the course of the same day; and so the time of exposure with the same apparatus will necessarily vary from day to day, and even during the same day, to obtain the same result (Plate II).

What, then, is the meaning of a calculation in minutes of the time of exposure? When an operator talks in this way it shows that he is completely ignorant of the essential conditions of the working of his apparatus. Every circumstance, in fact, can make the working of his apparatus vary—the temperature, the hygrometric state of the air, the motor, the static machine, the coil, the perfection of his conductors, the thickness of the glass of the tube used, etc. In speaking, therefore, of X-rays, it is not the time of exposure that is to be taken into account, for it is of no significance, but it is the total quantity of X-rays given out by a tube at a fixed known distance. Before speaking of their quantities let us mention their quality, for the quality of X-rays seemed but a short time ago a factor of great importance. It was said that there was a whole series of X-rays, penetrating or not penetrating, less penetrating or more penetrating, and that the one kind had qualities which the others lacked. Benoist, to measure these, invented his radio-chromometer, a sort of spiral staircase with twelve steps made of aluminium, getting thicker and thicker, with the centre

composed of a thin sheet of silver. Given a source of X-rays, if these were examined through a radio-chromometer, one of the steps would have the same illumination as the base. If this was the fifth step, it would be said that the source produced "X-rays No. 5 on the radio-chromometer of Benoist," and so on. Recent researches by Noiré upon this point seem to show that these opinions must be entirely modified. Suppose that we have a source of light behind an apparatus like the radio-chromometer of Benoist through which light can penetrate, it would be legitimate to speak of rays of light more penetrating and less penetrating, although the only question of real importance to establish is that their penetration is proportional to their number. What requires measurement is the intensity of the source; the number of rays which this supplies will determine their effect. At the distance at which they are used there is no need to consider whether such and such an X-ray carries farther or less far, but only to ascertain the number of those which traverse the surface to be treated, and their therapeutic action is in direct ratio to their number. Our experience with X-rays produced by the static machine completely justifies this view, for when a hard tube is used, marking 10 or 12 on the radio-chromometer of Benoist, a given sum total of X-rays (and their therapeutic effect) is obtained half as quickly again as when, with the same apparatus, a half-soft tube, marking 5 or 6 on the radio-chromometer, is used. To these facts, which are constant and cannot be doubted, the objection may be made that the same result is not produced with a coil. This is true, but this is due to the different conditions of working of this apparatus. By the law of Faraday, no induced current is possible except with an interrupted primary current. Now, in working with a hard tube attached to a coil it is necessary to increase the ampèrage of the primary current, and then it is not possible to attenuate sufficiently the spark of breakage, and the primary current becoming almost continuous, there is no induced current. Further, since the inverse currents increase in intensity like the primary currents, the valve of Villard is not able to stop these. This means that when a good coil is used a moderate voltage and a reduced ampèrage is required (60—70 volts for an average of 4 ampères in the primary current). On the other hand, with an adequate static machine set up as in our case, it is possible, and it is better, to work with extremely hard tubes marking 10 to 12 on the radio-chromometer of

Benoist. In this way is secured the maximum working in a minimum time. We have accordingly been able to reduce the period of exposure to about six or seven minutes for each sitting. For the sake of prudence we have increased this time, which leaves too small a margin for the slightest inattention on the part of the operator, and our usual sittings last from ten to fifteen minutes according to external conditions of the atmosphere, the tubes, etc.

From what has preceded one may conclude, and experience has proved it, that the quality of X-rays has absolutely no importance in the treatment of ringworm. Even if it is admitted that there are different categories of X-rays, with different qualities, all are depilatory, and all equally so when equal quantities are compared.

It remains to consider the question of quantity. Attempts have been made to measure the sum-total of X-rays produced by a tube in terms of the current which produces them before its arrival at the tube. This is easy by means of a milliampère meter. It may even be said that it is useful to do so, for it is possible by this means to control the losses and leakages of an apparatus. But this method of measurement is inadequate. For, supposing we have two tubes of different thickness of glass (and no two tubes are alike), although the same amount of current is supplied to each, a very different sum-total of emerging rays is obtained. It is obvious, therefore, that X-rays ought to be measured *at their exit from the tube*. It was with this object that Holzknecht invented some pastilles, made of sulphate of potash in a resinous compound, the colour of which was altered by X-rays. These were placed at the same distance from the source of X-rays as the skin, and the degree of their change was calculated on a standard scale.

These products, which were of a secret composition, of which two types were in the market which were not identical, and of which the price was considerable, are now no longer obtainable. In order to replace them Dr. Noiré and I invented in 1904 an X-ray radiometer, the principle of which is analogous. It is based upon the alteration caused by X-rays in Bristol paper coated with an emulsion of platino-cyanide of barium, in collodion with acetate of starch. These pastilles ought not to be placed at the same distance as the skin of the patient but at half this distance—that is to say, with our localisers, at $7\frac{1}{2}$ centimetres from the source of X-rays or the anticathode.

The pastilles while under the influence of X-rays should be covered by black paper, or if not, the working should be in a semi-obscurity, for daylight sets back the changes in the platinocyanide of barium. Our X-ray radiometer has a standard tint called "Tint B." This tint is such that when the pastille placed at 7½ centimetres has taken its colour the skin placed at 15 centimetres has received exactly the quantity of X-rays necessary to insure the complete depilation of the region without irritation, without dermatitis, and without compromising the ultimate re-growth of hair. It is, moreover, the exact quantity that the human skin can receive without damage in a single sitting. Our pastilles of platinocyanide of barium are in constant use by us, and no single patient is ever submitted to the apparatus without these being provided each with a pastille, and it is this which gives the time of exposure. This time varies constantly from day to day, from hour to hour. The source may vary from moment to moment, without any unsatisfactory result; the same colour of the pastille will indicate the same sum-total of X-rays received, whatever may be the time of their action. Several drawbacks have been alleged against our radiometer. I will review the principal. It is said "I have followed all the rules, I have not exceeded the colour B, and yet I have obtained a dermatitis." I reply, "This is because the pastille was not placed at the half-distance between the diseased skin and the source, but farther off from the source, and nearer the affected skin; or it is because, the pastille being in its proper place, the working was in full daylight, which caused a set-back in its change of colour." Or, secondly, it is said, "I have not been able to get a change in your pastille." I reply, "It was placed farther off than the proper half-distance, or else the source of rays was weak at this point, and was therefore unable to produce any therapeutic effect." Or it is said, again, "The pastille changed to the colour B and yet depilation was not effected." I reply, "This is because the pastille was placed at less than the half-distance required, or else one had to do with a tube so large that the pastille placed at the half-distance was on the surface of the glass wall." In fact, in order to use our radiometer, only small or medium-size tubes should be used. These, moreover, are the best on every account. The pastilles ought to be placed at a distance of at least 2½ centimetres from the glass of the tube; if not, the heat

generated by the glass wall affects the pastille and increases its coloration. It is said, again, that "whether one uses your pastille or not, there are idiosyncrasies which explain dermatitis." I reply, "In that case, why have we never met with these in 4000 treatments with radio-therapeutics every year?" We have also two nurses who have never had a single case of dermatitis since May, 1904, although they have made 7000 exposures without coming across one instance of idiosyncrasy. In 1905 a deputy-nurse had three cases of incomplete regrowth of hair, a result which was foreseen by simply looking at the pastille, the colour of which had exceeded tint B. After her departure there was not another single case; in fact, one may say at once "in radio-therapeutics the factor of idiosyncrasy is neglible." It is not idiosyncrasy but the faults of working which cause dermatitis. Two possible errors to be met with in using our radiometer must, however, be mentioned. First, when it is wished to compare the colour taken by the pastille with the standard colour of the radiometer the comparison should be made, not by artificial light, but by daylight. In artificial light the colours both of the pastille and of the radiometer are no longer exact, and differ, as do all colours with all kinds of artificial light, according to the nature of the illumination used. Even in daylight a certain experience of the eye is required to state with exactitude the identity or not of the two colours, but this experience is quickly and easily acquired. Our nurses, in fact, come to appreciate exactly this colour without recourse to the radiometer, merely by looking at the pastille, and that, too, while it is under the X-rays. But in order to dare to do this very great experience is required, an experience which I myself cannot lay claim to.

Another cause of error, and one which may be grave, is that a certain number of imitations of our radiometer have been made in Germany, and amongst these are some in which the colour of the standard cannot be exact. It follows, of course, that many false estimates may in this way be made, when the principle I have just laid down, and which is well established, is forsaken.

Technique of Radio-Therapeutics of Ringworm.

Having thus examined the general nature of our apparatus in all its details, how do we use it? This is what I am about to tell you now.

The ringworm patient having been examined and patches of ringworm being recognised, two possible types of case may present themselves: either the patches are few in number and isolated, in which case a sitting may immediately be effected, using one application of X-rays; or the patches are numerous and it may be necessary to depilate the entire scalp. In this latter case it will be necessary to plan out the applications. For this purpose localisers are used of different diameters, care being taken that those used are not so large that the head may form inside them too great a convexity. With the localisers, applied by hand to the scalp, a tracing is made with a brush dipped in ink of the operations which will be necessary, restricting the area of these as much as possible, but yet so as to insure that no single diseased point upon the head has escaped the action of X-rays (Plate III, fig. 1). It is of little consequence if the circles overlap, and we shall see immediately why. The first sitting being completed, the position is immediately marked by any means desired, so as not to risk making upon the same spot a second application. The patch treated is covered with a disc of lead, kept in its place by an elastic band, and the second exposure proceeded with, and so on for the others (Plate III, fig. 2).

In this way it is possible to make the ten or twelve exposures necessary to depilate the entire scalp without any time-interval between them. The patient runs not even the risk of a headache. Towards the conclusion of the operations necessary for the depilation of the whole scalp the head of the patient is thus armour-plated with sheets of lead, which leave free only those spaces, of all shapes, which have not yet been subjected to the X-rays. At the end of the second operation (and it is better to conduct it without an interval, so as not to lose sight from one sitting to another of the work effected and that which remains to be done) the scalp has undergone no change in appearance, and will remain thus for about fifteen days. At this time the hair falls under the influence of the smallest traction, all the hairs have their root-end atrophic and sharpened like the point of a needle (Plate IV).

On the eighteenth day we usually wash the head with soap, rubbing and pulling out with the fingers all the weak hair. In this manner we avoid the dissemination of germs, for it is well known that the parasites are in no wise killed by X-rays in the doses used.

When the head has been thus bared during from ten to fifteen days

the roots of trichophytic hairs may still be seen imbedded in the skin; these are the last to fall, and they must not be allowed to remain, for they could, as we have seen in two or three cases, infect the new hair. Daily washings with soap will remove them. By the thirty-fifth day the head thus treated should be entirely bald and not retain one single diseased hair. With all our children from the first day of operation the entire head is anointed daily with weak tincture of iodine.

Tincture of iodine, freshly prepared . . .	1
Alcohol of 80 %	9

This application insures local protection, and when a scalp need not be entirely depilated it prevents the infection of the healthy parts.

The head thus treated remains bald for two months (Plate III, fig. 3). It then becomes covered with lanugo and adult hairs, sometimes at first in a very irregular way. At other times, again, the healthy hair comes back in islands, marking exactly the place of the ringworm patches. In any case the new growth ought to be, in normal circumstances, complete within four months. When the colour B of the radiometer has been exceeded the regrowth may be retarded in places for a month or six weeks, but it must be understood that hair which has not come back within six months will never grow again. It is quite certain and a very remarkable fact that after exposures which have been too strong, but yet not very strong, a cicatricial atrophy comes on, which will entail a definite absence of regrowth without there having been any trace of dermatitis. This, however, should never happen if one has been careful. It is seen, then, and may be insisted upon here, that this excellent method for the cure of ringworm is a delicate method. It is possible, without causing great injury, to be incautious in the treatment of epithelioma by X-rays; in such cases a slight degree of dermatitis is without bad effect upon neoplasic tissue which it is wished to destroy, but in the treatment of ringworm every error of the method will have to be paid for by an incomplete regrowth or by none. *Caveant medici!*

There are, moreover, many degrees between the complete and perfect regrowth and the complete absence of this. When the tint B has been exceeded one sometimes sees in the place of the old hair, which is smooth, a growth which is woolly, crinkled, and "Ethiopian." Or, again, upon a patch which has been too much treated the hair

may come back, but thinned. However, it is not necessary to linger further in describing these bad results, since they can and should be avoided. An operator who is careful, even with the appliances at his command to-day, appliances which the future will no doubt make still more perfect, ought to avoid entirely these ill-effects. Insufficient application conduces, besides, to various very different bad results. The position of the treated patches is indicated by atrophic hairs, which copy exactly the atrophy of alopecia. The hair is sharpened like needles, and takes the form of printers' points of exclamation, characteristic of alopecia areata. In these cases depilation may be pushed far enough for cure of the ringworm to result. In others diseased hairs may remain and the whole process must be commenced again. Let us say here that a second exposure should not be made on the same place within the month; after this the exposure may be made in accordance with the rules given above without running any more risk of lack of regrowth than at the first sitting.

Financial and Therapeutic Results of the Radio-Therapeutics of Ringworm.

After having explained the working of our apparatus and our methods of using it, we wish now to show the results which our work at the École Lailler has brought about in the struggle against tinea in Paris. I wish first to distinguish ringworm from favus. Favus with scutula is not cured with certainty by a single exposure to X-rays. One application, if well made, cures four fifths of the disease. We then are accustomed to go over with depilation by forceps the few points upon the old diseased surface where new scutula make their appearance. Favus without scutula (Favus impetiginoides or pityroides) may in ordinary cases be cured in one sitting. Ringworms, including large and small spored, are always so cured. Now, in the population of Paris favus is uncommon, ringworm very widespread. In these conditions the general result of the treatment of ringworm by X-rays ought to be, and has been, excellent, and these results have been many times repeated. The number of children affected with ringworm, cured without admission to hospital, has been considerably increased, and consequently the number of cases of ringworm admitted to the hospitals has correspondingly

diminished, and for these latter the time of their detention has been lessened by five sixths. Therefore it has been possible to abolish in the hospitals a great part of the accommodation given up to ringworm and to apply this to other purposes. Ringworm formerly was cured on an average in twenty-seven months: it is now possible to cure it in six weeks. Parents who were not willing to undertake for two years the trouble of the treatment of their children, and demanded admission to hospital, will undertake this trouble for two months. They will bring the child to the sittings at a fixed time, and to the medical visits of observation which are preliminary to obtaining the certificate of cure for each patient. Now, a ringworm patient in a hospital in Paris costs 2·80 francs per day to the Assistance Publique; treated in the way mentioned, the only cost is the X-ray exposures (of which from one to twelve may be required in order to denude the entire head), the cost of which is about 50 centimes each. If the number of ringworm cases may be taken to be constant, and if the number of children cured without admission to hospital is increased, the number of cases admitted is diminished. In the same way if the time of detention is lessened in every case, the accommodation needed before for ringworm will become too extensive. This result has immediately followed. On January 1st, 1904, I was able to give up to the Assistance Publique a group of buildings capable of holding 150 beds. These 150 beds are to-day given over to two new departments of the hospital, one for medicine, one for surgery. Now, a bed in a hospital in Paris represents on an average a capital of 10,000 francs; 150 beds represent therefore 1,500,000 francs. In six months I shall be able to give up to the Administration another group of buildings capable of holding about 100 beds—that is, a million of francs. Up to 1903 the children affected with ringworm lived at the École Lailler at the Hospital of St. Louis during a period of time exceeding two years, so that, occupying all the building which we no longer use, the École Lailler used to have on an average 110 cures per year. In the first year of treatment with X-rays (1903–1904) we had 327 cures. In 1905 we had 504 cures. The cure of a case of ringworm used to cost on an average 2000 francs: it now costs 260 francs. Finally, when a ringworm patient required two years of treatment in hospital, the Assistance Publique was forced to send to provincial hospitals colonies of Parisian children the subjects of ring-

worm. These colonies which thus afforded hospital accommodation for 250 children at a cost of 1·90 francs per head per day, have naturally now been abolished. I do not wish to tire you, gentlemen, with the enumeration of useless figures. It is, furthermore, quite easy to sum up the financial position with the statement that with the application of X-rays for ringworm the Assistance Publique will have recovered at the end of this year a capital of 2½ millions of francs; and, further, it makes now and will continue to make a saving certainly exceeding 300,000 francs per annum, a sum which will increase from year to year. In short, we hope, my assistants and I, within a very few years to erase from Paris even the memory of the epidemics of ringworm which it has experienced. I should be very reluctant, gentlemen, not to associate with these results the names of the two devoted assistants who have given me their help in this work, the one on the technical and the other on the clinical side; these, gentlemen, are Drs. Noiré and Pignot.

[Translated by E. Graham Little.]

SOCIETY INTELLIGENCE.

THE DERMATOLOGICAL SOCIETY OF LONDON.

The Annual Meeting of the Society was held on Wednesday, May 9th, 1906, Dr. J. J. Pringle in the chair.

The Hon. Treasurer's and the Hon. Secretaries' reports having been read and adopted, and the usual business of the Annual Meeting of the Society having been duly transacted, the following gentlemen were elected to form the Executive Council for the Session 1905–1906:

Dr. H. G. Adamson, Mr. Willmott Evans, Dr. T. Colcott Fox, Dr. James Galloway, Mr. Malcolm Morris, Dr. J. A. Ormerod, Dr. J. J. Pringle, Dr. Edward Stainer, Dr. J. Herbert Stowers, Dr. Norman Walker.

Hon. Treasurer.—Dr. H. Radcliffe-Crocker.

Hon. Secretaries.—Dr. Arthur Whitfield, Dr. E. Graham Little.

The following cases were brought forward:

Dr. H. G. Adamson showed a case of ? *tuberculides* with unusual distribution. The patient, H. J—, was a boy aged 7 years. Over

a circular area of about 5 inches in diameter, with the navel as a centre, were scattered some thirty well-marked shallow scars of from $\frac{1}{8}$ inch to $\frac{1}{3}$ inch in diameter. Among the scars were about a dozen millet-seed to split-pea sized slightly raised red papules or nodules, having thin silvery scales on their surface, which suggested psoriasis, though there was distinct infiltration. The eruption had begun three years previously as a single red patch at the navel; it had gradually spread to the present extent, the red nodules coming and fading, and leaving scars without ever ulcerating. At times the whole area was said to swell up and to get very red. There was a faint yellowish-brown pigmentation over the whole patch and extending just beyond the group of scars and nodules. In addition there was present at the inner side of the right arm a circumscribed, irregular, dry, scaly, red patch of superficial dermatitis said to have been present about twelve months, and there was a like patch on the inner side of the thigh. The patient was thin, but there were no physical signs nor symptoms of tuberculosis. The hands and feet were not cold.

No member present would offer a diagnosis, and it was suggested that the case should be watched and shown again later.

Dr. S. E. Dore showed, by the courtesy of Dr. Pringle:

(1) A case of *Adenoma sebaceum* in a man, aged 26 years, a tailor by occupation. The lesions varied in size from a pin's head to a hemp-seed, and were distributed in the form of pinkish papular or rounded elevations on the flush areas of the face and on the alæ nasi. The telangiectatic element was well marked, but owing to the somewhat sparse distribution of the lesions the general effect was that of pale pink patches dotted over with red points. In addition to this condition of the face there were numerous warty growths on the back, and in the lumbar region there was a large, projecting, fatty tumour, and adjacent to it numerous soft, flat fibromata, so frequently associated with typical Adenoma sebaceum.

An important feature of the case was that the eruptive elements on the face had not developed until comparatively late in life, five to seven years being given as their duration by the patient.

A brother and a sister were stated to suffer from a similar complaint, the father and mother being healthy. There was no evidence of any

mental deficiency in the patient himself, but the fact that he was born prematurely at six months had a possible bearing on his condition, and the presence of a supernumerary nipple on the left side was also of interest.

(2) A man, aged 31 years, who had suffered from Hodgkin's disease eighteen years ago, and complained of the successive eruption of "pimples" on various parts of his body during the last eighteen months. The lesions consisted of small, hard, indolent papules, capped by a small crust, but without decided evidence of central necrosis, and occurring in groups of two or three, the most recent of which were situated on his penis, and had been present for about a year. It was suggested that the condition might be allied to that of pseudo-leukæmic prurigo, on the ground that the diagnosis of Hodgkin's disease had been made when the patient was in Guy's Hospital eighteen years ago, but the lesions were not sufficiently marked to allow of making any firm diagnosis, nor did they itch, which was strongly against this hypothesis. Moreover, the possibility that the glandular enlargement might have been really due to tuberculosis, as well as the objective characters of the lesions present, suggested the diagnosis of *tuberculides* for the skin condition. At the time of exhibition the patient had marked enlargement of his right cervical chain of glands, but there was no sign of increase in size of any of the other lymphatic glands which were stated to have been previously enlarged.

Mr. Willmott Evans showed a case of *Actinomycosis*. The patient was a woman, aged 38 years; five years ago she suffered from some affection of the left tonsil, and this was treated by cauterisation. Two and a half years ago some nodules appeared on the left side of the neck; these softened after a time, broke down and discharged pus, and in the pus the patient noticed little yellow particles. The formation of nodules extended downwards and under the chin. Some of the broken-down nodules healed but others appeared. When shown the patient had much scar-tissue on the left side of the neck, but there were still several sinuses discharging pus, and over the manubrium sterni were two ulcers. There was a small scar on the right side of the neck. Mr. Willmott Evans said that in his opinion the diagnosis of actinomycosis was almost certain from the

longitudinal arrangement of the nodules and scars on the side of the neck, and this diagnosis was confirmed by the history which the patient gave that yellow particles had been discharged in the pus. Further confirmation was also provided by the fact that extensive improvement had followed the administration of potassium iodide during the last two months.

Dr. James Galloway and Mr. T. E. A. Pearman brought forward a case of a young girl, in her second year, suffering from an unusual form of *unilateral œdema*. The parents of the child were healthy, and there had been no complication at the time of birth; no history of any similar affection had been observed in other members of the family.

On inspection it was noted that the greater part of the left lower extremity showed well-marked œdema. The tissues were firm and pitted with difficulty, the colour of the part being white rather than pink. The natural folds of the skin at the ankle were obliterated. The œdema was most pronounced on the leg, more especially towards the foot and ankle, and gradually disappeared in the thigh; some œdema, however, could be still appreciated at the upper portion of the thigh, and the left labium was stated to have been slightly affected. The left side of the face was affected by the same type of œdema, so that the tissues on the inner side of the right orbit and over the nose were especially noticed to be swollen. The rest of the body, so far as can be ascertained, was free of œdema. There was no sign of visceral disease; the urine was quite free of albumen; there had been no evidence of phlebitis or vascular disease, and there had been no recurrences of erythematous or erysipelatoid inflammation of the parts. The temperature of the child had run a normal course. The child was intelligent and appeared to be in good health. The appearance of the parts did not suggest the diagnosis of sclerema nor of œdema neonatorum.

The case was regarded as an unusual one and was examined carefully by the members present. Dr. Parkes Weber and Mr. George Pernet* regarded the case as an example of the condition described by Meige as *chronic hereditary trophœdema*.

* *Vide Nouvelle Iconographie de la Salpêtrière*, No. 6, 1899, p. 453; and also the Review by Mr. George Pernet, *British Journal of Dermatology*, 1900, vol. xii, p. 372.

The character of the lesions of the affected areas of the body agrees with the descriptions given by Meige and other authors; it is noteworthy, however, that no history of any similar condition in the family has been obtained.

Dr. Graham Little showed (1) a case of *Granulosis rubra nasi* in a lad, aged 12 years, who had been brought up to the hospital for ringworm of the scalp, the other disease having passed unnoticed by the mother. It was therefore impossible to say how long the patient had had the affection for which he was now shown. This was a very slight degree of this curious and as yet somewhat rare condition. There was a very finely granular eruption, only visible with a lens, upon the cartilaginous portion of the nose. There was a general redness of this portion, and upon close examination many tiny drops of pellucid sweat could be seen upon the reddened area, and also in the median depression of the upper lip, just below the nose. The drops of sweat very soon formed again, even when carefully wiped dry with a handkerchief. In view of the interesting cases of family disease of this type recorded by Dr. Pringle, another child, the brother of this patient, had been examined and had been found to be quite unaffected. The patient seemed to be in other respects in normal health.

(2) A case of *Erythema keratodes* of the type described by Dr. Brooke in the *British Journal of Dermatology* for 1891. The patient was an elderly man, who had had the disease for three years at least. The keratosis was of an exaggerated degree, but confined to the right foot. The hardened mass thus present was about half an inch in thickness, the surface being very warty. For about a quarter of an inch beyond the limits of the hardened area there was a vivid pink areola outlining the patch, which was some three inches in length by two in breadth. The foot had been very painful in walking before treatment, but this symptom had been relieved by application of salicylic acid ointment. The other foot was not in any way affected.

Dr. Radcliffe-Crocker thought that the keratosis was probably due to hyperidrosis, the feet being obviously sweaty. Some members suggested the possibility of its being due to tertiary syphilis.

Dr. J. M. H. MacLeod showed (1) a case of *Adenoma sebaceum.*

The patient was a well-nourished boy, aged 8 years. He was the eldest of a family of three boys, the other two being healthy. The parents were both alive and enjoyed good health. The mother had been subject to fits until she was seven years old, but since then had been fairly healthy. At birth nothing abnormal was noted in the boy's skin, and it was not till he was about a year old that the earliest lesions of his present complaint were detected. At the age of ten months he had a fit, which lasted several hours, and from which the doctor who attended him did not think he would recover. A couple of months later the mother observed two small red spots on the nose similar to those which are now present, and since then the eruption had been steadily increasing. The boy continued subject to fits till he reached the age of five years, when he had the last one, which rendered him unconscious for thirty-six hours. From the mother's description the fits seemed to have been epileptic. Since the last seizure the bodily health of the boy had been good, and he had taken his food well and slept well. Mentally, however, he had always been backward, and his intelligence was below par. For the last two years he had been to a special school for mentally deficient children, but as he was so difficult to control he had recently been discharged from there. The mother said that he had frequently run away from home and remained away for a day or two, till he was found and brought back again.

The eruption presented the classical picture of a well-marked case of Adenoma sebaceum. It consisted of small, red to yellowish-white papules, varying in size from that of a pin's head or smaller to that of a split pea. The majority of the lesions were rounded in shape, a few of the larger ones being irregular in outline, as if they were due to the coalescence of several papules. The surface of the lesions was smooth and convex, and in many of them presented fine telangiectases, which gave it a vivid red colour. The lesions were symmetrically arranged on the face and were in greatest profusion on the cheeks, side of the nose, and naso-labial folds, where they formed semi-confluent patches. Discrete lesions were present also on the forehead and chin. The only part of the face from which they were absent was a small area around the mouth. Where the lesions were most numerous they were deepest red in colour, and many of them were translucent; where they were sparse, as on the forehead, they were

pale yellowish-brown, and had a waxy appearance, or presented the same tinge as the neighbouring skin. In addition to these characteristic lesions, there were a few variously sized soft nævi. These were yellowish-brown in tint, and were covered with fine lanugo hairs. The largest of them was about the size of a bean and was situated on the left side of the forehead. In addition to the lesions on the face there were a number of small fibromata on the body, scattered chiefly about the lumbar regions, and several of these had the loose, baggy appearance which is noticeable in the lesions of Recklinghausen's disease. In the same region near the spine there was a small patch of slightly inflamed follicles plugged with comedones.

(2) A case of an infant, aged 5 months, with peculiar congenital growths situated on the right upper eyelid near the inner canthus, and reaching down to the position of the lachrymal duct. The lesions consisted of (*a*) a small pear-shaped tumour about the size of a No. 5 shot, situated on the eyelid and of the same colour as the skin, which was movable and apparently attached to the fibrous tissue of the eyelid, and had the consistence of a fibroma; and (*b*) a small ovoid, immovable tumour, which extended beyond the canthus to the position of the lachrymal duct. The latter growth was about 1 cm. in length, and seemed to be connected with the underlying bone. The right eye was defective, the cornea being irregular in shape. There was also constant epiphora, owing probably to the absence or defective development of the lachrymal duct on that side or to its blockage by the growth. The clinical appearance of the lesions suggested the somewhat rare condition of *multiple dermoids*, which was borne out by the situation of the lower one, which corresponded to the site of the junction of the lateral nasal process and the maxillary process of the embryo. Another peculiarity of the infant was a bald patch on the right side of the scalp, which was said to be due to pressure at delivery, and over which the hair was beginning to grow. This patch extended from the forehead as far back as the upper border of the occipital bone, and was about two and a half inches in breadth. The skin over it was smooth and stretched, but not definitely atrophic. The patch was distinctly raised above that of the surrounding scalp owing to what seemed to be a thickening of the subcutaneous fissure, but its exact nature was uncertain.

Dr. J. J. Pringle showed a case of *Xantho-erythrodermia perstans*, of which a full report will be published in a later issue of the Journal.

Dr. Sequeira showed *a case for diagnosis*, the patient being a girl, aged 19 years, suffering from infiltrated swellings upon the nose and cheek. The swellings were situated on the right side of the nose, and in the region of the right lachrymal sac, and on the right cheek. They resembled gummata, and in one there was distinct fluctuation. These lesions had all developed in the last six months. The right lower canaliculus had been slit up by operation in infancy. There were also corneal nebulæ which Mr. Lister reported were not interstitial but due to old ulceration. There was no choroiditis, and the teeth were unaffected. On the right thigh, from the hip to the knee, the skin was the seat of large, circular, pigmented scars, evidently due to the breaking-down of ulcers. These date back to the patient's second year. The tongue had a peculiar white appearance—leukoplakia—resembling that seen in tertiary acquired syphilis. There was nothing in the family history to suggest congenital syphilis, and nothing in the patient's history which would indicate the acquired disease.

The case aroused considerable interest among the members of the Society present, and it was generally agreed that the condition was probably due to congenital syphilis.

Dr. Whitfield showed a little girl, aged 6½ years, suffering from *linear lichen planus*. The history showed that the eruption had come on over the whole extent at one time, three months previously. When shown the eruption was limited to the left buttock and leg. Commencing in two narrow parallel lines about a sixteenth of an inch in width and about half an inch apart, and situated just below the left iliac crest, a streak ran down the buttock and then curved forwards over the front of the thigh, and then the two lines, becoming fused into one, ran downwards and inwards, following somewhat the course of the sartorius muscle and ending immediately below the internal semilunar cartilage. The streak was made up of characteristic papules with some scaliness of the surface. There were no noteworthy symptoms. Dr. Whitfield said that he thought such cases were rare, particularly in childhood, and this was an especially fantastic distribution. No nerve, segmental area, or Voigt's

line corresponded with the distribution of the eruption. There was no eruption elsewhere, and this he thought was usually so. In his experience such cases were particularly obstinate to treatment.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

A MEETING of this Society was held on April 25th, 1906, Dr. H. WALDO, President, in the chair.

The following cases were exhibited:

Mr. G. W. DAWSON showed (1) a young married woman, aged 29 years, the subject of *tertiary syphilis*. The patient presented symmetrical patches of ulceration about the knees which began as "lumps" about five years ago. The condition had, apparently, been unrecognised until a few days ago, although she had had medical advice.

Mr. HARTIGAN quoted the opinion of Finger and Ehrmann, of Vienna, to the effect that 40 per cent. of women presented no cutaneous manifestations of syphilis until the tertiary stage was reached.

Mr. CAMPBELL WILLIAMS remarked that other syphilitic lesions, such as tabes, were seen more frequently in women at the present day than was formerly the case.

(2) (for Dr. EDDOWES) photographs of patients suffering from *Dermatitis artefacta*; (3) photographs of cases of *pustular syphilide* and *severe dermatographia*.

Mr. T. J. P. HARTIGAN showed a female patient with a vesicular eruption at the end of the right middle finger, accompanied by some *onychia*. The condition had been present for some four months, and there was a good deal of aching pain in the digit, which was said to be worse at night. She had been in the habit of washing the cloths used for wrapping up meat, her husband being a butcher, and it was thought at first that she might have inoculated herself with some poisonous material in this manner. The only irritating substance that was found on analysis of the cloths was boracic acid in small quantities.

The general opinion with regard to the case was that there was some necrosis of the ungual phalanx, probably syphilitic in origin.

Dr. Edward Stainer showed a case of *linear scleroderma* in a girl aged 19 years of five years' duration. Commencing at the right anterior superior spine of the ilium and running obliquely downwards and inwards was a sclerodermatous streak almost exactly following the course of the sartorius muscle and ending a little below the knee. There was no history of previous injury. The patient also had some rosacea. She was now under treatment with the X-rays.

THE NETHERLANDS SOCIETY OF DERMATOLOGY.

The *Eighteenth Meeting* of the Society was held on June 4th, 1905, Mr. Teljer in the Chair.

The Chairman first remarked on the loss sustained by the Society by the death of Mr. Spruyt Landskroon.

The first discussion arose in connection with the treatment of various skin-affections by means of radium.

Mr. de Buy Wenniger showed a case of severe *Lupus vulgaris*, in which considerable benefit had been obtained from exposure to radium; eighty sittings had been given in this case. Mr. Wenniger remarked upon the variation in activity of different samples of the radium salt.

Mr. Wijn remarked on the successful result he had obtained in the case of an angioma.

Mr. van der Hoop spoke of cases of epithelioma, angioma, and lupus which he had treated with very variable success.

Mr. Rietema criticised the method of treatment, remarking that it seemed to him to be time lost; surgical methods were the only ones of practical and certain service.

After further discussion, which seems to have been on the whole not in favour of treatment by means of radium, Mr. Teljer proposed to bring the subject of treatment by radium and allied methods before the Society for discussion at its next meeting.

Mr. Schoonheid demonstrated a case of *multiple benign sarcoid* in a young man aged 16 years. This case, resembling those reported by Boeck and Darier, showed many features recalling the lesions described as *tuberculides*. In the case shown there were two sorts of tumours, glandular swellings and cyanotic cutaneous masses. The infiltrations consisted of mononuclear leucocytes in a hyperæmic and proliferated connective tissue. It was proposed to treat the case by the administration of arsenic.

Mr. Broers then showed a case of *Lichen spinulosus* in a man aged 30 years, which had existed for six months. The eruption commenced in the neck, and afterwards made its appearance in the groins and in other regions in the form of dry acuminate papules on a slightly hyperæmic base. Mr. Broers compared his case with the definition given by Dr. Crocker, and referred to a case that he had seen in the out-patient department of University College Hospital, and discussed the diagnosis.

Mr. Broers showed a second patient suffering from *Epidermolysis bullosa hereditaria* with the characteristic lesions for the disease. On slight traumatism of the skin profuse bleeding occurs; the skin is atrophic in character, the scars keloid and scattered over the surface. The scars are partially covered with a thick horny layer, and in some of them milk-white cysts have formed. The nails are friable; the skin of the palms and soles is hyperidrotic. Dermographism can be demonstrated, and on one occasion the patient suffered from urticaria following medical treatment. The patient's father, his brother and sister, his brother's child, all show the same disease.

Mr. Broers then discussed the diagnosis of the condition, mentioning the opinions held by various German and French authorities. Mr. Broers also showed a case of pityriasis rosea and cases treated by means of the X-rays.

Mr. Mendes da Costa then discussed the treatment of ringworm by means of X-rays as at present carried out by Sabouraud.

Mr. Steensma read a paper dealing with the principles of treatment by means of application to the epidermis. J. G.

CURRENT LITERATURE.

THE CLINICAL CHARACTERS AND ANATOMY OF SO-CALLED ADENOMA SEBACEUM. Franz Poör. (*Monats. f. prakt. Derm.*, April 1st, 1905, p. 379.)

This affection was first described in 1885 by Balzer and Ménétrier, and in 1890 by Pringle, and since then cases have been recorded by various writers. But the cases have been far from numerous, and the descriptions differ often so much from one another that it is difficult to believe that they have always been of the same nature, although described under the same name. Two main divisions may at any rate be made, the one consisting of those congenital cases in which benign, always symmetrical, isolated, elevated, yellowish or pinkish lesions appear on the nose, cheeks, or naso-labial furrow. These lesions may also make their appearance in childhood, or even at puberty, but not later. They are painless, remain stationary, and histologically show immense increase in the number of sebaceous glands which are thus closely crowded together. Pringle's case comes under this heading, and "Pringle's type"* is known in literature.

A second variety is composed of those cases which appear asymmetrically on any part of the body. They are congenital, or make their appearance in childhood or at puberty; they vary in size from a pin's head to a pea, are yellowish-red, and constitute closely-crowded but never coalescing semicircular characteristic tumours. To this group belong the cases of Jamieson, the two cases of Bandler and Jadassohn, the case of Pollitzer, and that of Csillag.

These are the two great groups, but other cases have been brought forward as Adenoma sebaceum which do not belong to either group, and must be looked upon as cases of Epithelioma adenoides cysticum or some other disease. But excluding these cases, the question remains whether the two groups are to be looked upon as coming under the same heading, or entirely different from one

* "Der Pringlesche Typus."

another, as Kothe thinks. The morphological difference between the two shows itself in the localisation and the manner of the appearance of the lesions rather than in the divergence of the lesions from one another. The one group is remarkable for the symmetry of the lesions and the early involvement of the face; the other group never shows symmetrical lesions, and the face is not specially affected, while the rest of the skin surface may be. The major portion of the lesions in both cases is built up of sebaceous glands, of which some lobules are hypertrophied, but the glands do not show other changes. Neither type is capable of spontaneous retrogressive changes. Heredity could not be proved, except in the case of Taylor and Barendt's family. The theory of the French school that the disease is related to nervous and brain disease is not supported by recent observers, with the exception of Pelagatti.

The nature of adenomata has given rise to considerable difference of opinion. Whereas one writer looks upon them as formed of newly-developed glandular tissue which does not perform its physiological functions, and thus differs from glandular hypertrophy, another regards them as a granulation tissue building in a new direction. Ziegler looks on an adenoma as a new formation, which in structure resembles a normal gland, but whose newly-formed tissues are wanting in the functions of a normal gland. But against Ziegler's view it has been shown by Caspary and others that the newly-formed glands separate out fat-containing masses which stain with osmium just like a normal gland. The question of nævus is also far from clear, but it may be held that a congenital origin may include a congenital disposition to the development of certain cells in a certain way during subsequent years of life. The congenital origin of the beard and pubic hairs and of the wisdom teeth may be considered undoubted, and the congenital origin of those cases of Adenoma sebaceum which develop about puberty may have a similar early origin. At any rate, there is no reason for making this late development of the lesions an essential difference between the two varieties. And having regard to the nature of the lesions and their mode of origin it seems preferable to include the disease under the group of nævi and call it "Nævus sebaceus" in preference to Adenoma sebaceum.

Poör relates the case of a girl, aged 16 years, who had the typical lesions on her face, and especially on the nose and in the naso-labial furrow. The lesions had first made their appearance at the age of 8 years. The lesions were examined histologically and showed the usual structure.

J. L. B.

A HISTOLOGIGAL DISCOVERY IN THE SKIN (APPARENTLY A NEW EPIDERMOIDAL NERVE?). Selenew. (*Monats. f. prakt. Derm.*, May 15th, p. 537.)

In a microscopical section from the dorsal surface of the hand of a pemphigus foliaceus patient the writer found a tailed bullet-shaped body which had apparently not been described before. The skin from which the section was cut came from a region which was slightly affected and only later on showed bullæ which resembled pemphigus bullæ, were lax and contained a small amount of serous cellular liquid. In the region of a bulla, but in the rete Malpighii which was closely covered by the horny layer and the stratum lucidum and was undergoing vacuolar degeneration, lay this particular body, approaching closely the horny layer, but distinctly separated from it by a capsule.

Examination with a $\frac{1}{12}$ objective showed this capsule to be lined with endothelial cells, as was also a clear space at the outer periphery of the body. The latter was composed of nucleated epithelial cells, whose contours could be distinguished by focussing, and between which a fine terminal of the tail-like prolongation could be seen to lose itself. The whole body itself stained like the rete Malphighii but less strongly; the tail gave the impression of a myelin filament with a covering of Schwan. Two hypotheses only are admitted by Selenew as possible—one that it was a protozoon, the other that it was an epidermoidal nerve, lying in the rete Malpighii. The first hypothesis was more than dubious because the body had a tissue formation, and the literature does not record such protozoa in the skins of animals or men. The second hypothesis seemed more probable inasmuch as the body resembled those pictured by Krause, although differing from them in structure and localisation. A third hypothesis, that it was a rudimentary hair or gland, does not appear to find favour with the author.

J. L. B.

THE PATHOLOGY OF LICHEN RUBER PLANUS DIFFUSUS. B. Spiethoff. (*Monats. f. prakt. Derm.*, May 15th, 1905, p. 541.)

It is well known that any distinctive process involving the cutis propria causes a scar. If the papillary body is not reconstituted in an anatomically perfect manner, it has been shown by Heitzmann that the resulting scar will show epithelial depressions corresponding to irregular papillæ. The question arises whether these newly-formed papillæ are physiologically equivalent to those of normal skin. *A priori* this is not probable, since the vascular network of a normal papillary body must be wanting in them. The development of fibromata and sarcomata in scar-tissue is not rare, but skin diseases dependent on processes in the papillary bodies are not, as a rule, found to occur in scars.

The following case is therefore of interest. The patient was a woman, aged 77 years, who, when 40 years of age, had various swellings on her back. There was no history of syphilis or a syphilitic cure. For some years she had had an itching eruption, recurring from time to time, and when seen having lasted, so far as the present recrudescence went, for four months. The skin of the back, chest, abdomen, and extremities was more or less diffusely infiltrated, red, in places bluish-red, and slightly scaly. In addition to these diffuse patches were small, red, finely scaly nodules, and, especially on the arms, various whitish atrophic areas, the size of a pfennig, surrounded by a small pigment area. On the back were seen whitish, hard, circumscribed scars. The eruption, which reached on the back right up to the scars, stopped sharply at the edge of the scars. Only on one larger and one smaller scar were found, partly in the centre, partly at the periphery, but everywhere separated from the diffuse eruption by intervening scar-tissue, some small, sharply circumscribed, reddish, finely scaly nodules. The diagnosis was Lichen ruber planus diffusus; cicatrices (?). A similar case has been described by Hallopeau. What was particularly interesting in the case was the fact that the eruption ceased sharply at the edge of the scars, and that in the scar-tissue occurred several small islands of the same eruption. Two explanations are possible: one that the destructive process involved only the papillary bodies and not the cutis propria; the other that, unlike the rest of the scar, the papillary bodies were automatically and therefore physiologically functionally recon-

stituted, and therefore became capable of reaction. A histological examination was not made. J. L. B.

ON CERTAIN CHANGES IN THE SKIN CAUSED BY MOIST DRESSINGS (SUDAMINA OF MACERATION). AUDRY. (*Ann. de Derm. et de Syph.*, March, 1905, p. 238.)

AUDRY made the experiment of wrapping a leg, the seat of an artificial dermatitis, in dressings saturated with boiled water, and performed a biopsy forty-eight hours later in the site thus treated. He found that what had appeared to be superficial vesicles on the skin proved to be "poro cysts," epidermal dilatation of the terminations of sweat-ducts filled with leucocytes consisting almost entirely of polynuclears. These cysts varied in depth, some being confined to the stratum corneum, others descending to the lower layers of the site. The epithelial cells were in no wise altered, and the epidermis and the changes in the dermis seemed restricted to some dilatation of the blood-vessels of the subpapillary plexus, the vessels being enveloped by leucocytes. The section did not go deep enough to establish the condition of the sweat-coils. E. G. L.

THE ANATOMY OF LICHEN PLANUS OF THE MUCOUS MEMBRANES. Dr. F. v. POOR. (*Derm. Zeitschr.*, October, 1905, p. 645.)

ACCORDING to Gautier, Lichen planus affects the mucous membranes in two thirds of the cases. Herxheimer found them affected 93 times in 127 cases. The author describes a typical case, and was able to excise a piece of the buccal mucous membrane for examination. His object was to compare the lesions of the mucous membranes with those of the skin.

He found the usual dense infiltration of mononuclear cells round the dilated blood-vessels, some mast-cells clinging to the blood-vessels, and no plasma-cells. There was a cavity extending from the submucosa to the under surface of the epithelium, extending over an area of three to four papillæ, and due, as he maintains, to a fluid effusion and not to the process of preparation. Many writers have referred to the presence in Lichen planus lesions of these clefts between epidermis and cutis.

Another interesting point was the discovery of granules in the upper epithelial layers, which by their general appearance and staining properties could not be distinguished from keratohyalin.

His results support Crocker's original contention that the disease takes its origin, not in the papillary layer, but from the vessels beneath.

W. B. W.

THE USE OF BALSAM OF PERU IN THE TREATMENT OF WOUNDS AND CHRONIC ULCERS OF THE LEG. Dr. ARONHEIM. (*Münch. med. Wochenschr.*, September 12th, 1905, p. 1782.)

THE author was led to make a trial of balsam of Peru owing to the appearance in an earlier number of the *Wochenschrift* of a paper by Dr. Burger strongly recommending its use.

He finds it an excellent application for contused wounds, ulcers, etc. Burger made use of pure balsam, but the author uses it in the form of an ointment: Argent. nitr. 0·3, balsam Peru 5·0, paranephrin 2·0, ung. diachyli, ad. 50.

W. B. W.

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JULY, 1906.

THE HISTOLOGY OF A CASE OF LINEAR NÆVUS.*

By H. G. ADAMSON, M.D.Lond., M.R.C.P.

The microscopical examination of linear nævi has shown that they have not always the same histological structure. In some few instances the nævus has been composed of masses of one or other of the skin organs—*e. g.* Hallopeau's linear nævus made up of agglomerated hair-follicles and sebaceous glands, Petersen's case, and Elliot's case of sweat-gland nævus, and Jadassohn's case in which were found masses of sebaceous glands. In one of Unna's cases there was an inflammatory condition resembling that of chronic eczema. *In the large majority of cases examined*, however, the growth has been of the *hard nævus* type, that is to say, a localised ichthyosiform condition—acanthosis and hyperkeratosis—with more or less cell-infiltration and vessel-dilatation in the dermis. These conditions are entirely opposed to those obtaining in *soft nævi or moles*, and they are in no way explained by the theory of cell-inclusion of Cohnheim which so nicely fits the most generally held view as to the epithelial structure of the soft moles. There is some difference of opinion as to the meaning of the "inflammatory" changes so often found in the corium in sections of linear nævi. Jadassohn believes that there is always a slight degree of latent inflammation present, and that the least irritation suffices to produce a manifest inflammation. Meissner thinks that the earliest changes

* A recent summary of the knowledge of the histology of linear nævi, a bibliography, and notes of the histological examination of a case are given by Menahem Hodara in a paper in the *Journ. des Mal. Cut. et Syph.*, August, 1905.

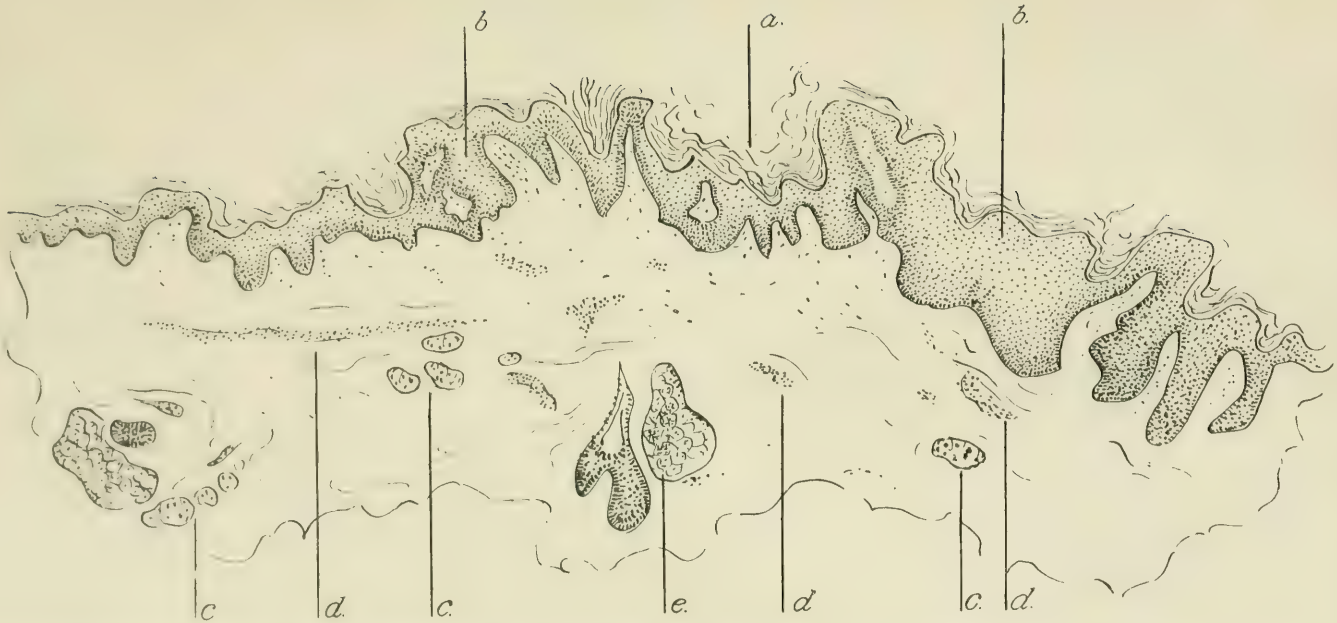
are vessel and lymphatic dilatations, which by augmenting nutrition lead to all the other changes of cell-proliferation, papillary hypertrophy, acanthosis, and hyperkeratosis. Others regard the changes in the corium as of a "secondary" nature.

The case of linear nævus the microscopical appearances of which I am about to describe was shown by me at a recent meeting of the Dermatological Society of London, and a short note of it is published in this Journal (January, 1906, p. 35). As will be seen from the following notes, the structure of this particular nævus was that of a *hard nævus*, viz. a combined acanthosis and hyperkeratosis, and without any inflammatory changes in the corium, a fact which would lend support to the view that such changes are secondary and not an essential part of the lesion.

Histological note.—A piece of tissue was removed for microscopical examination. The portion chosen was from a part of the "streak" on the chest just above the nipple. Here the lesions were closely packed, soft, pinhead-sized, flat, pale-brownish papules.

Under a low power the section showed (1) the *epidermis* irregularly thickened, and with the appearance of being thrown into folds. Irregular processes dipped down into the corium. The free surface was irregularly raised and depressed, the depressions here and there being deeper and separating individual papilliform growths. The thickening of the horny layer was moderate in degree, and most marked in the depressions.

(2) The *corium* showed no inflammatory cell-exudation; even at the apices of the papillæ (or rather of the processes which extended upwards between the down-growing processes of the epidermis) there was not an unusual number of cells. A sweat-gland was seen in some of the sections and hair-follicles and sebaceous glands in others; but there was no abnormal collection of these, and they themselves were normal. The only unusual appearances here were (*a*) the presence of a large blood-vessel or vessels running in a horizontal direction in the region of the sub-papillary plexus, or perhaps a little lower than this is usually situated. The vessel appeared sometimes in longitudinal section, sometimes in cross section, and it was accompanied by an unusually large nerve, the cross section of which appeared five or six times in the field. [The presence of this large nerve and vessel cannot be considered abnormal, but it is somewhat unusual, and is



(*a*) Thickened horny layer, especially marked in the depressions in the epidermis. (*b*) Hypertrophy of prickle-cell layer. (*c*) Large nerve running through section. (*d*) Large vessel running through section. (*e*) Sebaceous gland.

perhaps suggestive when one remembers that some have claimed that these nævi occur along the course of a cutaneous nerve. But an etiological relationship could scarcely be claimed unless one examined the nævus in other parts and found the nerve there also.]

On examination under a high power it was found that the process was truly an acanthosis with some slightly abnormal degree of hyperkeratosis. There were no pathological changes to be seen in the prickle-cells and the cornification appeared to be normal.

The nævus must be classed with the hard nævi showing epidermic thickenings only, and no snaring off of epithelial elements to form a growth in the corium as in the soft nævi.

AN EXPERIMENTAL STUDY OF SOME CASES OF URTICARIA.

By W. ERASMUS PARAMORE, M.A., M.B.

Dr. A. E. Wright in 1896 described two cases of urticaria which were remedied by the administration of calcium chloride. Later in the same year he suggested that the disease was of the nature of a serous hæmorrhage associated with defective blood coagulability and due to a diminution of the content of the blood in calcium salts.

No easy and quick method of estimation of the content of the blood in lime salts or the relation of the latter to the coagulation time was available until a further research, instituted by Dr. Wright, on the relation existing between calcium salts and blood coagulability reached its conclusion in 1905.*

It was then possible by use of his methods to investigate this element of the blood and the *rôle*, if any, it played in the production of urticaria. The following research was in consequence commenced on a series of cases which hitherto had resisted all therapeutic measures.

A brief *résumé* of Dr. Wright's methods is appended.

Content of Lime Salts in the Blood.†

Method.—The determination is made by admixture of equal volumes of freshly-

* "Exaltation and Diminution of Blood Coagulation by Therapeutic Measures," *Lancet*, October 14th, 1905, p. 1096.

† *Lancet*, October 14th, 1905, p. 1096.

drawn blood from the finger with equal volumes of progressive dilutions of ammonium oxalate made up in physiological salt solution. The volumes of mixed blood and decalcifying solution, taken up into a pipette and separated by bubbles of air from each other, are allowed to stand for twenty-four hours. In the case where the blood has been completely decalcified no clot is formed, the corpuscles falling as a deposit at the bottom of the fluid column; where decalcification is not complete a clot is produced. Thus an exact estimation of the lime content of the blood is determined in terms of oxalate of ammonium from which the mass of lime can itself be deduced. The word "lime" is taken to include both calcium and magnesium.

The Coagulation Time of the Blood.

Wright's coagulation tubes are used. Columns of blood, freshly drawn from the finger, 5 cm. in length, and of a volume equal to that of 5 c.mm. of mercury, are exposed to a temperature of 37° C. in a water-bath. The coagulation tubes are removed from the water-bath, the first after an interval of thirty seconds, the second after forty-five seconds, the third after one minute, and so on. The contents, after removal of the tube, are immediately expressed on to blotting-paper, the time at which the first trace of fibrin formation is noted being taken as the coagulation time of the blood.

In dealing with the cases a preliminary investigation was made in order to determine whether the blood was characterised by a delayed coagulation time such as Wright considered necessary for the production of a serous hæmorrhage, and, if so, how far such a delayed coagulation time was dependent on a diminution of the content of the blood in lime salts. The results of this examination are displayed in Table I.

TABLE I.

Case.	Date of examination.	Coagulation time	Dilution of oxalate of ammonium in physiological salt solution which just sufficed to effect complete decalcification of the blood.	Diagnosis.	Observer.
I, F.	July 5, 1905	2 mins. 15 secs.	$\frac{1}{1500}$	Angio-neurotic œdema	Dr. Wright
III, B.	Aug. 7, 1905	45 secs.	$\frac{1}{750}$	Urticaria	W. E. P.
IV, S.	April 29, 1905	2 mins. 30 secs.	$\frac{1}{1500}$	Giant urticaria	Dr. Wright
V, H.	May 3, 1905	2 mins. 15 secs.	$\frac{1}{1500}$	,,	,,
VI, deV.K.	Feb. 20, 1905	2 mins.	,,	Urticaria	W. E. P.
,, ,,	May 16, 1905	,,	,,	,,	,,
VII, W. M.	May, 1905	1 min. 20 secs.	$\frac{1}{1050}$	,,	,,
VIII, T. H.	July 20, 1905	1 min. 22 secs.	,,	,,	,,

No absolute normal can be given for comparison, but a normal for a particular diet and a particular individual is possible; for non-milk drinkers the normal has been found equal to $\frac{1}{1500}$ oxalate of ammonium with a coagulation time of one minute forty-five seconds (Wright).

Cases 1, 4, 5, and 6 are seen to be characterised by such a delayed coagulation time; of these, Case 4 alone shows an appreciable diminution in the content of the blood in lime salts as compared with the presumed normal. Cases 1, 5, and 6 reveal a lime content which is equal to $\frac{1}{1500}$ oxalate of ammonium. In Cases 3, 7, and 8 the coagulation time is seen to be short, the lime content considerably in excess of the normal.

A priori it is seen that in these cases there is no lack of calcium; nevertheless, acting on the supposition that urticaria is of the nature of a serous hæmorrhage associated with defective blood coagulability, and that the latter is made evident by the prolongation of the coagulation time, it was determined by the exhibition of a calcium salt to so modify the blood in the direction of its lime content as to lead to a permanent exaltation of its coagulability in the hope that by such means a cure of the disease might be effected (other things being equal, the coagulation time varies directly as the lime contents).

Case 1.—F—. Patient of Dr. Wright's, suffering from angio-œdema.

July 5th, 1905.—2 p.m. Coagulation time, 2 mins. 15 secs. Complete decalcification with a dilution of $\frac{1}{1500}$ oxalate of ammonium. Urine 2 per cent. salts. 3.50 p.m., ℞ 5j calcii chloridi by the mouth. 5.55 p.m., coagulation time, 45 secs. Complete decalcification with a dilution of $\frac{1}{1500}$ oxalate of ammonium. ℞ Tabloid thymus gr. v. *t. d. s.*

July 13th.—There has been no further urticaria. Coagulation time, 48 secs. Complete decalcification with a dilution of $\frac{1}{900}$ oxalate of ammonium. Incomplete decalcification with a dilution of $\frac{1}{700}$ oxalate of ammonium.

In this case it was found that the modification of the lime content, resulting in a reduction of the coagulation time to less than one third of its previous value, was accompanied by an alleviation of symptoms within three quarters of an hour, and that, later, a complete cure was affected; no return of symptoms has been reported.

Case 2.—E. B—. In every respect similar to Case 1.

Case 3.—B—. Patient suffering from decalcification urticaria. The patient was first examined a few days after an attack.

July 8th.—Coagulation time, 45 secs. Complete decalcification with a dilution of $\frac{1}{750}$ oxalate of ammonium. A few lesions were still visible.

August 12th. [*N.B.*—Owing to loss of a note-book date uncertain; an approximate date has been given.]—Complete decalcification with a dilution of $\frac{1}{600}$ oxalate of ammonium. Quite free from urticaria.

August 19th.—Coagulation time, 1 min. 30 secs. Complete decalcification with a dilution of $\frac{1}{1500}$ oxalate of ammonium. Moderately bad urticaria during the night.

August 20th.—1 p.m. R 5j calcii chloridi by the mouth. To-night almost entirely free from urticaria, very jubilant the next morning.

August 21st.—Again a slight touch of urticaria to-night.

August 23rd.—Quite free from urticaria. Dilution of oxalate of ammonium which just sufficed to completely decalcify the blood, $\frac{1}{900}$.

Patient was quite free from urticaria when he was last heard of on August 25th.

The patient at the time of the preliminary examination, though not suffering at the time from an attack of urticaria, had still a few visible lesions. He was watched, blood-examinations being made at intervals of about a week. At the end of the third week he became cognisant of an approaching attack; on examination the lime salts of the blood were found to have fallen to half their previous value, the coagulation time being considerably delayed. The following night he had little sleep and typical lesions developed. The modification of the lime content of the blood by the exhibition of calcium resulted in almost immediate recovery.

It is therefore apparent that the conditions here present are in effect comparable to those already found in Case 1, though masked at the time of the preliminary examination—that is to say, at a period when the disease was not present—either by the effects of a dietary containing lime or perhaps by the re-entry into the circulation of the calcium salts of the blood which had previously been thrown out of solution by the injection or imbibition of decalcifying substances.

Cases 7 and 8 (under the care of Dr. Graham Little) may very well, if opportunity for repeated examinations had been possible, have presented a similar history.

Case 4.—The exhibition of calcium resulted in an acceleration of the coagulation time, 26 secs., as compared with 2 mins. 30 secs. No corresponding alleviation of symptoms occurred. On one occasion the salt content was found greatly in excess of normal; at this period the urticaria was particularly troublesome. It is to be regretted that no further observations on the salt content were made.

In view of the known effect of alcohol in prolonging the coagulation time of the blood, the experimental exhibition of this drug was determined on in this patient in order to discover what relation, if any, imbibition of this liquid might bear to the disease, the patient, a colonial, being in some degree addicted to this indulgence. Unfortunately, when he presented himself for experimentation the signs of a commencing attack were already present, yet it was not until the coagulation time of the blood was delayed by the action of the drug that the symptoms became pronounced. The patient had, moreover, that night and the following day, one of the worst attacks of his experience.

Watch was kept during the experiment on the coagulation time of the blood, observations being taken at intervals of ten minutes, an unexpected quickening being observed which reached its maximum at the end of half an hour, a coagulation time being recorded of only ten seconds, a fact which was witnessed by Wright and others.

One and a half hours later the coagulation time was found to be delayed, and in the succeeding hour symptoms rapidly developed.

The observations taken are recorded below:

Case 4.—S—. Giant urticaria.

May 25th.—2.40 p.m. Coagulation time, 35 secs. Dilution of oxalate of ammonium which just sufficed to decalcify the blood, $\frac{1}{700}$. 3.18 p.m., 100 c.c. whisky taken; 3.28 p.m., coagulation time, 35 secs.; 3.28 p.m., coagulation time, 30 secs.; 3.48 p.m., coagulation time, 10 secs.; 4.10 p.m., coagulation time, 20 secs.; 4.25 p.m., coagulation time, 15 secs.; 4.35 p.m., coagulation time, 15 secs.; 4.50 p.m., coagulation time, 30 secs.; 5.12 p.m., coagulation time, 35 secs.; 5.25 p.m., coagulation time, 45 secs.

Case 5.—As in Case 4, no improvement was recorded; the calcium was therefore discontinued. The patient spent the summer at Aix-la-Chapelle, and returned comparatively free from symptoms.

Case 6.—de V. K—. May 16th, 1905, 2.30 p.m. Coagulation time, 2 mins. Complete decalcification with a dilution of $\frac{1}{1500}$ oxalate of ammonium. Incomplete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium. 2.47 p.m., R 3j calcium chloride given by the mouth; 3.5 p.m. Coagulation time, 30 secs. Complete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium. Urticaria no better.

May 17th.—Coagulation time, 40 secs. Complete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium. Porridge was discontinued to-day.

May 18th.—Coagulation time, 45 secs. Complete decalcification with a dilution of $\frac{1}{1800}$ oxalate of ammonium. Incomplete decalcification with a dilution of $\frac{1}{1500}$ oxalate of ammonium.

May 19th.—Coagulation time, 30 secs. Complete decalcification with a dilution of $\frac{1}{2100}$ oxalate of ammonium. A bad attack of urticaria.

May 20th.—Coagulation time, 30 secs. Complete decalcification with a dilution of $\frac{1}{900}$ oxalate of ammonium.

May 23rd.—Coagulation time, 45 secs. Complete decalcification with a dilution of $\frac{1}{900}$ oxalate of ammonium.

May 24th.—Coagulation time, 45 secs. Complete decalcification with a dilution of $\frac{1}{1800}$ oxalate of ammonium.

May 25th.—Coagulation time, 55 secs. Complete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium. Incomplete decalcification with a dilution of $\frac{1}{900}$ oxalate of ammonium.

May 29th.—Coagulation time, 47 secs. Complete decalcification with a dilution of $\frac{1}{1050}$ oxalate of ammonium. There has been no urticaria since May 26th.

May 30th.—Coagulation time, 45 secs. Complete decalcification with a dilution of $\frac{1}{1800}$ oxalate of ammonium.

June 3rd.—Coagulation time, 48 secs. Complete decalcification with a dilution of $\frac{1}{900}$ oxalate of ammonium. Incomplete decalcification with a dilution of $\frac{1}{750}$ oxalate of ammonium.

June 6th.—Coagulation time, 50 secs. Complete decalcification with a dilution of $\frac{1}{750}$ oxalate of ammonium.

The urticaria disappeared under treatment with calcium as in Case 1. The patient attributed his attacks to oatmeal, having remarked that one of the former ceased one or two days after the discontinuance of this dish.

Having been free from symptoms for a period of a month, he was persuaded to attempt an experimental reproduction of the disease by the imbibition of freshly prepared oatmeal-water; 100 grammes of fine oatmeal were suspended in 1000 c.c. of distilled water, and of this mixture he took one pint a day for four days. The results are appended.

June 6th.—5.0 p.m. Coagulation time, 48 secs. Complete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium. 5.30 p.m., R 1 pint of oatmeal-water by the mouth daily (100 grms. in 1000 c.c.). 6.30 p.m., coagulation time, 25 secs. Complete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium.

June 21st.—Coagulation time, 48 secs. Complete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium.

June 22nd.—Coagulation time, 37 secs. Complete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium.

June 23rd.—Coagulation time, 33 secs. Complete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium.

It was found that urticaria did not recur, hence oatmeal was considered to have had no part in its causation.

In August and September a recrudescence took place.

He was examined on September 27th.

September 27th.—Coagulation time, 1 min. 7 sec. Complete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium.

Urticaria at night only for fourteen days, the lesions few in number, and consisting of small papules, chiefly on the arms and legs. It was decided that an attempt should be made by the exhibition of citric acid to produce a prolongation of the coagulation time, together with an increased action of the kidneys, in order to wash out, as it were, any noxious substances that conceivably lay concealed in the subcutaneous tissues, and which by their continued presence served to maintain a condition of inflammatory irritability, and hence an increased transudation of plasma.

September 27th.—R Acid, citric, ʒij *t. d. s.*

October 3rd.—Patient complained that the urticaria was very

troublesome the last night, very few lesions being present. He had taken Mist. alba ʒj at 8 a.m. on the day of examination. 12 a.m., coagulation time, 1 min. 22 secs. Complete decalcification with a dilution of $\frac{1}{750}$ oxalate of ammonium. Patient passed a quiet night, little troubled by itching.

The later details in this case are of great interest in respect to the usual treatment of urticaria produced by the ingestion of certain food-stuffs, by a saline purge.

On September 27th the lime content was equal to $\frac{1}{1200}$ oxalate of ammonium. Citric acid was administered in ʒij doses *t. d. s.* for six days. Under normal circumstances this dosage should have reduced the lime content by one half. Constipation supervening, the patient took on his own initiative Mist. alba ʒj; the lime content four hours later was found equal to $\frac{1}{750}$ oxalate of ammonium—*i. e.* twice that previously recorded, and four times greater than the quantum expected.

Parallel with these data the urticaria was exceedingly troublesome during the night previous to the taking of the purge, on the succeeding night practically quiescent.

October 3rd.—R Acid, citric, ʒij *t. d. s.*

October 6th.—Coagulation time, 1 min. 37 secs.

Complete decalcification with a dilution of $\frac{1}{1500}$ oxalate of ammonium.

The urticaria has been very severe, the patient complaining bitterly, wheals for the first time have made their appearance. By scratching the patient affirms he can raise a wheal at will. The lesions were distributed all over the body.

Progress in this direction not seeming to offer much hope of ultimate recovery, this course of treatment was discontinued, and in order to restore the patient to his former condition R Calcii lactatis ʒj was ordered. An almost immediate alleviation of symptoms followed, the wheals disappeared, an urticaria of a papular variety replaced the former, the patient was little troubled by itching and was able to sleep at night. It is thus found that an urticaria, slight in intensity, with few visible lesions, and those of a papular character, was by the exhibition of a decalcifying agent replaced by an urticaria of some considerable severity—the lesions in the form of wheals scattered all over the body and almost countless in number. On

restoration of the previous lime content the papular type was again reproduced with a corresponding alleviation of symptoms.

In an endeavour to decalcify the blood more rapidly than can be attained by the exhibition of citric acid, two of us who were at the time at work in the laboratory subjected ourselves to the action of oxalic acid taken by the mouth in ten-grain doses. We were led to this procedure in that the toxicity of the drug has been somewhat overrated (Ehrlich) and that the oxalic acid molecule is unbroken in its passage through the body. In my own case (Case 9), after two or three days' treatment, severe itching developed all over the body, being especially worse at night. At the end of a week I was obliged to discontinue the experiment, chiefly for this reason, but also from want of sleep and extraordinary irritability in response to any stimulus.

There were no lesions to be seen except an occasional papule and a few petechial spots, chiefly on the chest and legs.

In Case J— (*infra*) none of these symptoms were in evidence; his sense of well-being was as great after as before the experiment.

This incidental production of an urticaria by the ingestion of oxalic acid is of interest in connection with the urticaria which develops in some people after the ingestion of rhubarb, and points to the oxalates so plentiful in that plant as the cause of the subsequent lesions (Wright).*

An examination of the data obtained in these experiments reveals the fact that though a considerable diminution in the content of the blood in lime salts was at one time or another recorded, there was at no time in either case with whatsoever lime content any prolongation of the coagulation time. In consequence, an urticaria of this type cannot be held to be a serous hæmorrhage dependent on a diminished lime content.

An urticaria produced under such conditions must bear a similar relation to a decalcification urticaria that an active inflammation bears to a passive exudation. In other words, we have to consider a toxic or inflammatory urticaria.

Moreover, there is no parallelism in the two cases, and in my own case, after the maximum diminution in the lime content had been attained, an increase in the same content was registered, in spite of

* *British Journal of Dermatology*, 1896, p. 82, vol. viii.

the continued use of the drug, equal to the quantum originally present and more than double the minimum before obtained. The only feasible explanation lies in the suggestion offered by Wright when dealing with decalcification of the blood in relation to citric acid that the primary diminution is in reality a mere precipitation of the lime salts in combination; these at a later period again enter into solution.*

An extension of such explanation when applied to urticaria will account for the phenomenon witnessed in spontaneous recovery.

(*To be continued.*)

SOCIETY INTELLIGENCE.

THE DERMATOLOGICAL SOCIETY OF LONDON.

An Ordinary Meeting of this Society was held at 11, Chandos Street, W., on Wednesday, June 13th, 1906, Mr. Malcolm Morris in the chair.

Dr. H. G. Adamson showed—(1) a case of *Hydroa æstivale* in a girl aged 12½ years. The case had already been described in the *British Journal of Dermatology* (vol. xviii, 1906, p. 136, Florence P—, Case 6), as illustrating a type of case linking together the milder forms of "summer prurigo" of Hutchinson and the more severe forms of "Hydroa vacciniforme" of Bazin. The present eruption, consisting of papulo-vesicles distributed thickly over the face, the forearms, and the hands, and sparsely on the legs, had appeared during recent sunny weather. A week previously there had been present large vesicles upon the face and upon the forearms, but these had now dried up. The patient had been entirely free from eruption during the winter months. There were many faint, smooth, white, glistening scars on the forearms from lesions of previous summers, but the large bullous lesions on the face of last summer had left no scars.

(2) A case of *linear nævus* in a boy aged 11 years. The eruption

* "Certain Points in connection with the Exaltation and Diminution of Blood Coagulability by Therapeutic Measures." *Lancet*, October 14th, 1905, p. 1096.

had been first noticed at nine years of age. It was made up of small warty lesions arranged in clusters along a line which passed downwards across the bend of the left elbow towards the head of the radius, and continued then obliquely on the flexor aspect of the forearm to the middle of its ulnar border, and then downwards to the radial side of the wrist and across the thenar eminence to the tip of the thumb on its palmar surface.

Dr. James Galloway presented, *for diagnosis*, a patient suffering from chronic circumscribed dermatitis surrounding vaccination scars. The patient was a rather delicate woman aged 36 years and gave evidence of irritability of the skin, having had on various occasions eruptions with eczematous characters, principally on areas where friction occurred. Four years previously the patient had been revaccinated, and judging from the scars produced successfully, but she had also suffered from a "bad arm." The arm swelled to the wrist, and there had evidently been a diffuse septic dermatitis in the neighbourhood of the vaccinated spots. The general inflammation of the arm soon disappeared, but the inflamed areas round the vaccination took longer to disappear, and the skin never recovered.

There was now, after four years, a thickened margin with circumscribed, though irregular, outlines surrounding the three vaccination scars. The altered skin was distinctly, though not greatly, infiltrated; the colour was brownish-pink, and neither the colour nor the thickening could be made to disappear by pressure with the lens. This condition had persisted from the time that the general dermatitis following vaccination had disappeared.

The patient had been under Dr. Galloway's observation for four months, and no difference could be noted in the infiltrated areas during that time. A slight papular eruption surrounding the infiltrated area had, however, vanished under treatment. Dr. Galloway remarked upon the unusual characters of the eruption and put before the Society the possibilities of the eruption being of the nature of lichenification, the result of preceding dermatitis and friction. The long duration of the lesion, its apparently fixed character, the peculiar nature of the infiltration, were somewhat difficult to be accounted for in this way. As an alternative possibility, chronic tuberculosis of the skin had presented itself.

Various members of the Society mentioned their experience of varieties of chronic dermatitis following vaccination; and the general opinion, with which Dr. Galloway agreed, was that the case was not tuberculous, but of mildly septic character, intensified by friction.

Dr. Graham Little showed—1. a *case for diagnosis*. The patient was a lady aged 42 years, and had been under the care of Dr. Grosvenor Hinks of Southend, to whose kindness Dr. Little was deeply indebted for permission to show the case. She had been seen three months ago for a disease of the nose, and the diagnosis between tuberculosis and syphilis had been difficult. There was at that time a considerable degree of infiltration and redness of the nose, which had been noted for about a year. The shortness of this duration had weighed in favour of a diagnosis of syphilis, and the patient had been put on antisyphilitic treatment, but she had not improved after about two months of this. Her condition was, in fact, considerably worse, the infiltration increasing, and some ulceration taking place. She was now shown with the view of taking a consensus of opinion before commencing treatment for tuberculosis, which had been the earlier alternative diagnosis.

The general opinion was that the case was one of tuberculosis, and it was proposed to undertake a course of tuberculin injections combined with X-rays.

(2) A case of *Dermatitis herpetiformis* in a boy aged 12 years. There were at the present time very numerous grouped vesicles covering the greater part of the dorsal surface of both feet, and one or two of the toes on each foot. In addition, there was a single group of five vesicles upon the lower third of the left forearm, and a larger group of about twenty vesicles upon the right groin and right side of the scrotum. The boy gave a history of having had eruptions of this type, usually confined to his feet, and lasting for several months sometimes, and commencing as a rule in the summer. There was hardly any itching and no other subjective sensation in connection with the eruptions. The blood had been examined for eosinophilia, with the result that eosinophiles had been found in a proportion of only 1·5 per cent. The appearance of the eruption on the feet and toes, and the history of constant recurrence during hot weather for the past three years, had at first suggested a diagnosis of dysidrosis, but the presence of vesicles upon the groin and arm had made this untenable, and Dermatitis herpetiformis was adopted. The vesicles

were uniformly small, none larger than a pea, and became speedily purulent.

The general opinion was that this was a case of Dermatitis herpetiformis.

Dr. J. M. H. Macleod showed a case of *vitiligo*. The patient was a girl aged 9 years, who came up to the Victoria Hospital for Children for advice regarding a peculiar patch of leucodermia on the right cheek. The affected area was triangular in shape, the base of the triangle being formed by the outer half of the upper border of the right eyelid and the apex being situated about half an inch below the lower eyelid on the cheek. The skin of the patch was depigmented, presented the texture of the surrounding skin, was neither raised nor atrophied, and there was no alteration in its sensibility. The eyelashes of both lids in the affected area were white, the ordinary colour of the child's hair being light brown. In winter the patch was white, while in summer, as a result of the action of the sun's rays, it was pinkish with a slight tinge of plum colour. This colour, which was very noticeable in daylight, could not easily be distinguished by artificial light. The skin at the margins of the area did not present any marked hyperpigmentation. The lesion began at the age of four years and was gradually spreading. At the edge of it there was a small telangiectatic nævus which had appeared about the same time. The shape of the lesion, which was definitely triangular instead of being round or oval, and the absence of hyperpigmentation around it were noteworthy.

Dr. Radcliffe-Crocker and Mr. George Pernet showed:

(1) A bad case of *hypertrophic scarring* of the face following a burn in a woman treated by thiosinamin injections. About five years ago she had been severely burnt all round the face, including the chin, whilst taking part in a procession during the South African War dressed in the usual wool costume which has claimed so many victims. Mr. Pernet showed photographs of her condition at the commencement of the treatment, about four years ago. The hypertrophic scarring was very marked and hard, being considerably raised above the level of the skin and leading to much disfigurement. Mr. Pernet had treated her for about two years, with gradual improvement. For the last two years the patient had been lost sight of, but

she returned to the Skin Department of University Hospital a few days ago on account of her child, when it was remarked how much her own condition had improved. The affected parts had quite flattened down, the skin about them being smooth and supple, and considering the original condition, there was now very little disfigurement. The improvement, Mr. Pernet considered, could be fairly attributed to the persevering use of the thiosinamin injections.

(2) A case of severe right intercostal *Herpes zoster* in an adult male, who was shown by Mr. Pernet on account of the fairly large number of aberrant vesicles he displayed. Mr. Pernet had observed that the aberrant vesicles of Herpes zoster followed the original eruption, something like a secondary wave, being formed after the original or primary vesicular eruption had developed and been present for a short time. Their occurrence lent some support to the view that Herpes zoster was of the nature of an acute specific exanthem. Mr. Pernet suggested they might perhaps be the result in some unexplained way of the primary zoster eruption rather than of the morbid changes in the posterior ganglion.

Mr. George Pernet also brought forward cultures of *Megalosporon endothrix* from a case of *ringworm of the scalp and nails* in a girl aged 15 years. The scalp had been affected for ten years and some of the nails for about seven. Mr. Pernet had microscopically examined stumps and nail-scrapings, the former showing abundant segmented mycelial elements in and outside the hair. Mycelia were also found in the nail-scrapings. On glucose agar the hairs had at first given rise to a lilac growth, which it was thought would develop into violet cultures. But this had not been the case, although the tube had been kept in the dark, the growths turning out whiter and whiter with lapse of time, but even now there was a delicate, pale lilac-pink tint about the cultures. The fungus from the nails had also successfully grown, showing endothrix characters. Cultures of both hairs and nails on potato were also shown, the growth from the latter structures having a yellowish tint. This was the second time that Mr. Pernet had demonstrated the endothrix fungus by culture in Tinea unguium.* Mr. Pernet was indebted to Dr. Radcliffe-Crocker for the material in the present case.

* See Pernet, *Brit. Journ. Derm.*, vol. xiii, 1901, p. 268; vol. xiv, 1902, pp. 16 and 17.

Drs. Colcott Fox and Whitfield did not admit that this was a case of "endothrix producing violet cultures," only a very few genuine cases of which had been recorded. They considered the colour too faint a lilac to be classed with these cases.

Dr. Sequeira showed (1) a boy, aged 8 years, suffering from congenital *universal ichthyosis*. The abnormal condition of the skin was noticed when the child was three days old. His parents were healthy and this child was the only member affected of a family of five.

The case was an extreme one resembling somewhat the condition called "harlequin fœtus." The only parts which did not show the flaky, scaly condition were the palms and soles; these, however, were not normal, the skin being thick and dry. The scalp was severely affected and the hair was scanty. There was retraction of the eyelids and some palpebral conjunctivitis. The boy's intelligence was distinctly subnormal.

(2) A man, aged 26 years, suffering from *Xerodermia pigmentosa*. The patient was a farm labourer. The disease had begun in early childhood with the development of freckles on the face and hands. This was followed by the appearance of pigmented warts. Many of them had fallen off, leaving pale, slightly depressed scars. The affected areas also showed telangiectases, but these were not so numerous as in many instances. When admitted to the London Hospital in May the patient had a large epitheliomatous tumour in front of the left ear. The growth was as large as half a Tangerine orange, and had developed in the last six months. When shown there were many pigmented, warty growths scattered over the face, varying in size from a pin's head to a small marble. The hands were freckled and showed many small pigmented warts and a few telangiectases.

The interest of the case lay in the age of the patient, as very few children suffering from Xerodermia pigmentosa grew up. However, Thibierge and Dubois-Havenith had reported cases where the patients had been twenty-five years of age, and Riehl two aged forty and sixty respectively.

(3) A man, aged 42 years, unmarried, an Austrian by birth, suffering from *anæsthetic* leprosy. The patient had travelled all over the world. He had worked as an engineer in India, Burma, Siam, Hawaii, and Abyssinia. In Siam and Hawaii he came frequently in contact with lepers, but had never lived with them. He had syphilis twenty years ago, and was for two years under mercurial treatment. Eighteen

months ago he had noticed a circular red patch on the right forearm and, later, patches on the right leg and great toe. The former was painless, but the affection of the toe began with acute shooting pains. The patch on the right forearm was circular, purplish-brown in colour, and situated two and a half inches above the wrist on the dorsal aspect. It was anæsthetic to light touch, to prick, and to heat and cold. The lower external cutaneous branch of the musculo-spiral nerve above it to the elbow could be seen and felt as a nodulated cord under the skin. The ulnar and median nerves were thickened. The patch on the right leg was oval and pigmented and situated on the outer side of the leg in its lower third. The great toe on that side was swollen, red, and pigmented, the patch extending on to the dorsum of the foot for two and a half inches. These patches were also anæsthetic to touch, prick, and heat and cold. The external popliteal nerve was thickened. The patient had a slight nasal discharge, but was otherwise in good health. His opsonic index to tubercle was 0·8. It was proposed to treat him with small injections of T.R., making observations of the opsonic index to control the reaction.

Dr. Whitfield showed (1) a woman who had a small growth of three years' duration on the right cheek immediately over the zygomatic process of the malar bone. The history showed that it began as a small scurfy spot, which she believed to be due to the bite of a gnat, and since its first appearance the little patch had gradually extended up to its present size. On exhibition, there was a small, roughly circular patch about half an inch in diameter. The area was ivory-white in colour and somewhat shiny, except in the centre, where there was some scaling, but nothing resembling erosion or ulceration. The patch was slightly stiffened and gave the impression to the fingers of being infiltrated to about the thickness of an ordinary playing card. Dr. Whitfield said that at first he hesitated between the diagnosis of a patch of card-like morphea and a non-ulcerative rodent. He therefore, under eucaine anæsthesia, excised a small piece of the edge, and examination showed the lesion to be an uncommonly *superficial rodent ulcer*, which he now proposed to treat by means of the X-rays. A specimen was also shown under the microscope to demonstrate the unusual superficiality of the new growth.

(2) A child, aged 5 years, with a peculiar *persistent erythema* of the cheeks, nose, and ears. The child had been brought to Dr.

Whitfield on May 16th, 1906, and the lesions had then been present for six weeks. When first seen both cheeks and the tip of the nose and the lobes of the ears showed large areas of bright-red, infiltrative erythema, with gyrate margins but no central resolution. The child was in quite good health, but he was extraordinarily sensitive to the bites of fleas, always responding by the production of a large urticarial wheal. The blood-coagulation was slow, and accordingly all vegetable acids were, as far as possible, cut out of his diet, and calcium lactate was administered. The infiltration began to disappear immediately, and when shown the areas were flattened down and scaling. Dr. Whitfield also showed, to compare with this, a coloured drawing of a more extensive case, apparently of the same disorder, affecting the same regions, but also the extensor surfaces of the elbows and buttocks, which he had shown to the Society on March 11th, 1903. This case, though of much longer duration, had also gradually faded away. The question of the relationship between this disease and Lupus erythematosus was one on which he would offer no opinion, but he thought that there was certainly a group of cases in which watching the course for a time was the only method of arriving at a differential diagnosis.

(3) A child who had from birth been affected with a generally verrucose condition over the whole of the trunk, both back and front. The rest of the skin was quite normal and free from any tendency to ichthyosis. The trunk was of a blackish-brown colour, and very rough, and at first sight it seemed to be covered with thick scales. Closer examination showed, however, that the apparent scaling was in reality minute papillomatosis thickly set all over the surface. The regions of the nipples and the umbilicus were especially affected, and the axillæ showed a somewhat streaky arrangement of the growths. The child was fourteen and had the stature of a child of about seven. She was not a cretin, nor was there any sign of rickets, but there was evident arrest of development, which was perhaps due to achondroplasia, though the signs of this were not typical. Dr. Whitfield said that, though not a true ichthyosis, he thought *Ichthyosis hystrix* was the name best applied to these conditions.

(4) A microscope specimen showing *leprosy bacilli*. Dr. Whitfield said that probably few members of the Society had had the good fortune to come across a case of early leprosy in their clinics. The case from

which the specimen was prepared was that of a Columbian woman, aged 42 years, who had been in this country for two years. Six months ago she began to notice burning sensations in the forearms and fingers, and had been sent to King's College Hospital. At the first visit there was nothing to be seen or felt unless the fat lobules beneath the skin were perhaps rather obvious. She was treated for urticaria, although of course the possibility of some foreign disease was borne in mind. On coming again, no better, she was again carefully examined, and it was thought that perhaps parts of the skin on the forearms were of darker hue than others, though this was very difficult to decide owing to her generally very dark skin. There was also some very light increase in the "lobular" feeling of the fat and possibly some slight wheal-formation. One of the apparently darker places was therefore lightly scratched and squeezed, and the drop of blood stained for the bacillus, with the result that very characteristic clumps and isolated bacilli were seen in great abundance. Dr. Whitfield said that his chief reason for showing the specimen was to comment on the extreme ease with which the bacilli were found. He had no opportunity to perform the extemporary examination before, but his first attempt had been completely successful, showing that no special skill was required. He greatly regretted being unable to show this very early case to the Society, but she had left England immediately after the diagnosis had been made.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

The Annual Meeting and Conference of this Society was held at 11, Chandos Street, on Wednesday, May 23rd, Dr. H. Waldo, the President, in the Chair.

The Report of the Council and the Treasurer's Statement having been passed, the ballot for officers for the session 1906–1907 took place, and resulted in the following gentlemen being elected:

President.—H. Leslie Roberts, M.D.

President-elect.—E. Graham Little, M.D.

Vice-Presidents.—Wallace Beatty, M.D.; H. A. G. Brooke, M.D.; A. Eddowes, M.D.; H. Radcliffe-Crocker, M.D.; J. H. Stowers, M.D.; H. Waldo, M.D.

Treasurer.—Arthur Shillitoe, F.R.C.S.

Hon. Secretaries.—Spencer Hurlbutt, M.R.C.S.; G. Norman Meachen, M.D.

Council.—H. G. Adamson, M.D.; James Galloway, M.D.; A. J. Hall, M.D.; T. J. P. Hartigan, F.R.C.S.; T. Manners-Smith, M.B.; J. F. Payne, M.D.; P. H. Pye-Smith, M.D.; V. H. Rutherford, M.P., M.B.; G. W. Sequeira, M.R.C.S.; Edward Stainer, M.B.; C. H. Thompson, M.D.; Wilfrid B. Warde, M.D.

After a cordial vote of thanks to the retiring President Dr. Leslie Roberts took the chair, and called upon Dr. Sabouraud to give his oration on "The Radio-Therapeutics of Ringworm in the Municipal Laboratory of the City of Paris at the Hospital of St. Louis," a translation of which by Dr. Graham Little was published in the June issue of the journal.

CURRENT LITERATURE.

A CASE OF ACANTHOSIS NIGRICANS FOLLOWING CANCER OF THE BREAST. Menahem Hodara. (*Monats. f. prakt. Derm.*, June 15th, 1905, p. 629.)

The patient, a woman, aged 30 years, developed cancer of the breast two years ago, and last year the breast was removed. Two months after the beginning of the cancerous growth the acanthosis showed itself, with brownish to black colouration of the mouth and nostrils, with thickening and the formation of small nodules, itching, but no desquamation. Some time later the patient found a small black wart under the left breast. After the operation on the breast the black pigmentation almost disappeared, but six months later again increased in intensity and spread, involving, not only the face but also the neck, buttocks, axillæ, flexures of the elbows, and genitals. The entire skin of the face became dark, especially round the mouth and on the chin, and felt dry, but there was no scaliness. The skin of the neck showed still greater thickening, and presented appearances similar to those of lichenification with verrucose papules; no scaliness. In the axillæ were similar changes, but the papules were more prominent and the skin furrows deeper. On the thorax, back, below the breasts, and on the abdomen were symmetrically arranged patches. Below the left breast, or rather the place where it was, a lesion, the size of a crown, composed of prominent small, hard, black growths appeared, and on the front of the thorax many flat, black warts like nævi. Similar lesions were present on the labia majora, perineum, and thighs, and the warts were still more prominent and the colour darker, but again there was no scaliness.

It was of interest that the scars of the left breast showed no abnormality. They appeared as smooth white marks on the dark acanthotic area, the disease apparently stopping short of them. Similarly scars on the back showed the same

appearances. The patient felt well in spite of the dermatosis; the carcinoma had not recurred.

Acanthosis was almost simultaneously described in 1890 by Unna, Politzer, and Janowsky. Darier investigated the disease carefully later on, and called it "Dystrophia papillaris et pigmentosa"; he also pointed out its relationship to cancer. Of the thirty cases recorded twenty-five showed co-existent cancer, but the cause of the relationship is unknown. Excitation of the abdominal sympathetic by a malignant tumour has been suggested, but in the two cases in which a post-mortem has been made the suprarenals were found unaffected.

J. L. B.

INFECTIOUS IDIOPATHIC PURPURA. Gerber. (*Wiener klin. Rundschau*, May 14th, 1905, pp. 329–332.)

Letzerich succeeded in 1884 in obtaining from the blood of a girl who apparently died of purpura a bacillus similar to the anthrax bacillus, which, injected into rabbits, caused symptoms similar to those of purpura in man, and from the rabbits' vessels and organs the same bacilli could be again isolated. In this investigator's blood was also found some time afterwards the same bacillus, his illness having possibly occurred as a sequela of his examination of patients afflicted with hæmorrhagic purpura. Kolb examined five cases of purpura, three of which died, two recovered. Examination during life gave no results, but post mortem Kolb demonstrated in sections of skin, liver, spleen, kidneys, blood- and lymph-vessels a bacillus cultures of which injected into animals caused characteristic hæmorrhages. These researches seemed to point to the infectious nature of purpura, as also do some of the clinical phenomena.

Two cases are recorded by Gerber. The first, a man, aged 26 years, was ill for four days with fever and pains in the limbs. When seen in hospital he was pale, temperature 39·2°, pulse 120. On his skin, with the exception of the face, neck, and supra-scapular region, were many scattered hæmorrhages. In the succeeding days the hæmorrhages increased, the liver and spleen became swollen, and some albuminuria appeared. Polynuclear leucocytosis, otherwise nothing abnormal in the blood. The temperature suddenly fell to 38°, with sweating, and oscillated afterwards, finally reaching normal at the end of three weeks.

The second case was that of a labourer, aged 18 years, who shared the quarters of the first. When admitted he had been ill for eight days. Temperature 40·2°, pulse 120. Spleen felt. Whereas in the first case the face and mucous membranes remained free, here the nose and ear were involved both internally and externally. A week after admission the temperature fell, but two days afterwards it reached its former height; a systolic murmur appeared, the patient became delirious and died some days later. Post mortem were found parenchymatous degeneration of organs and fibrinous pericarditis, with hæmorrhages into the pleura pulmonalis.

As regards differential diagnosis, the only two possibilities were some septic disease and Typhus exanthematicus, and these were excluded. The infectious nature of the disease was perhaps shown by the fact that the two patients shared the same quarters. The cases remind Gerber of an elderly woman, aged 50 years, with "purpura fulminans" who, after an attack of constipation only relieved by strong purgatives, developed hæmorrhagic purpura and fever and died. This case, too, he considers to have been one of infection.

J. L. B.

LUPUS VULGARIS POSTEXANTHEMATICUS. Franz von Veress. (*Monats. f. prakt. Derm.*, June 1st, 1905, p. 585.)

It often happens that from a single Lupus patch the disease gradually spreads to form several separate lesions, but sometimes under favourable conditions these may spring up simultaneously in different parts of the body and we have an example of Lupus vulgaris disseminatus. A special variety of this occurs in childhood as a sequela of acute exanthemata, like measles and scarlet fever and varicella. One such case is brought forward in this paper with sixteen lesions. Sections of the patches showed the usual structure; no tubercle bacilli were found; the blood-vessels could not be demonstrated as taking a share in the development of the lesions. The conclusion is arrived at that the lesions are due to inoculation from the outside, because of the number of the lesions, the absence of metastases of internal organs, the absence of general embolism, and the occurrence of disseminated Lupus after and not during an acute exanthem. The only arguments in favour of a hæmatogenous origin, such as multiplicity and simultaneous occurrence of many patches of disease, can also be held to support the external inoculation theory, since inoculation can take place simultaneously in several places where a delicate child's skin has already been injured.

Histologically the absence of a share in the formation of Lupus patches by the blood-vessels or the occurrence of nodules in all the layers of the skin is against the hæmatogenous origin of this form of Lupus.

On the other hand, it might be argued that delicate children's skins are often injured without the development of Lupus, and that the inoculation theory is more or less an assumption in some cases.

J. L. B.

ANALYSES OF FÆCES IN DERMATOSES. Oefele. (*Monats. f. prakt. Derm.*, June 1st, 1905, p. 595.)

The digestive organs must be regarded partly as organs of absorption, partly of excretion. Skin and digestive organs can, to a considerable extent, support one another as organs of excretion and take one another's place. As an organ of excretion the skin can so act upon the composition of the juices of the body as to disturb the digestive fluids. Among the author's 1250 faecal analyses were some dermatological cases.

Amount of dry material in fæces.	Analyses of dermatological cases.
22 to 24 per cent.	1
26 „ 28 „	4
28 „ 30 „	2
30 „ 32 „	1
36 „ 38 „	1

The average of the 1250 chronic cases gave 21·53 per cent. dry material in the fæces. Acute diseases were not included. Two cases of Badefriesel gave 19·4 per cent. and 16·8 per cent. respectively. A case of furunculosis which was already cured gave 20·2 per cent. These three cases were therefore below the average. The constipated individual uses up his food much better than the ordinary man. In the cases quoted the average period between defæcations was 33½ hours—considerably above the normal. In three cases of skin-disease the total quantity of

faeces passed was respectively 58, 30, and 25 grammes, as compared with the normal 120 to 150 grammes of an ordinary individual in 24 hours. In chronic skin-diseases, therefore, the intestinal contents are twice as well used up as in the healthy individual, but at the expense of their quality.

Substances soluble in ether from dry material of faeces.	Analyses in chronic skin-diseases.
12 to 14 per cent.	1
16 „ 18 „	1
20 „ 22 „	2
24 „ 26 „	2
28 „ 30 „	2
30 „ 32 „	1

Since the normal is 16 per cent., it is evident that substances soluble in ether are increased in chronic skin-diseases, when percentages are taken. Absolutely, there may not be much difference from the normal.

Those true proteids which are soluble in thiosinamin and precipitable by tannin are not absorbed to excess, as is seen from these analyses:

Homogeneous proteids in dry material of faeces.	Analyses in chronic skin-diseases.
2 to 4 per cent.	2
4 „ 6 „	3
6 „ 8 „	1
8 „ 10 „	1

The relations between digestive tract and skin are therefore close; and in this connection one may call to mind the relationship between skin-pigment and tyrosin originating in the intestine, also the chlorine lost by the sweat, and its connection with the HCl secretion of the stomach.

J. L. B.

ON THE IDENTITY OF PARAKERATOSIS VARIEGATA WITH ANOTHER KNOWN SKIN AFFECTION. J. Csillag. (*Archiv f. Derm. u. Syph.*, July, 1905, p. 2.)

The author of this paper considers that the "Parakeratosis variegata" of Unna, Santi, and Pollitzer is identical with the "Dermatitis psoriasiformis nodularis" of Jadassohn, and he describes a case to support his contention. The chief difference which led Jadassohn to consider that the dermatitis which he described, though related to Parakeratosis variegata, was yet distinct from it, was the fact that in "Dermatitis psoriasiformis nodularis" the primary lesions, however numerous they might be, remained discrete, while in Parakeratosis variegata the lesions, though similar in character, tended to run together to form a network enclosing islands of unaffected skin. In the case described by the writer the patient was a woman, aged 65 years, and the dermatitis appeared as isolated micro-papules, identical clinically and histologically with those described by Jadassohn. After some time a new eruption of similar lesions developed, and these coalesced to form the network characteristic of the affection described by Unna. From the study of this case the writer has arrived at the opinion that the affection described by Unna is only an advanced stage or severe form of that with which Jadassohn's name is associated.

J. M. H. M.

THE HISTOLOGY OF MELANOSIS LENTICULARIS PROGRESSIVA (XERODERMA PIGMENTOSUM). Victor Bandler. (*Archiv f. Derm. u. Syph.*, July, 1905, p. 9, 1 plate.)

The writer describes a typical case of the affection which Pick named Melanosis lenticularis progressiva and Hebra and Kaposi called Xeroderma pigmentosum. At the time when the biopsies were made which afforded the material for this research the patient had reached the age of 24 years. During the long course of the disease the various characteristic symptoms had all been noted, such as pigmentation, atrophic white macules, telangiectases, crusts, tumours, etc. A microscopical examination of a piece of the pigmented skin showed that the diseased process affected only the epithelium and the upper part of the corium, where the epidermis was thin; the basal cells were markedly pigmented and pigment was present also in the corium, and around the blood-vessels were cellular foci. Two small tumours were excised, one of which presented the structure of alveolar nævo-carcinoma, and the other was a carcinoma with a tendency to irregular growth and degeneration.

J. M. H. M.

ON SENILE WARTS AND EPITHELIOMATA ORIGINATING FROM THEM. Ludwig Waelsch. (*Archiv f. Derm. u. Syph.*, July, 1905, p. 31.) Two plates.

This condition of the skin—which has received a variety of names, such as "seborrhoic warts" and "senile hyperplastic sebaceous gland tumours"—has been more or less carefully described by a large number of writers, such as Neumann, Barthélemy, Pollitzer, Unna, Brocq, Jarisch, and Dubreuilh. In these descriptions there is considerable diversity of opinion, both with regard to the typical histological architecture of the lesions and their true place in the list of skin affections. With a view of assisting in the solution of these problems the writer has studied eleven cases which occurred, not only in old people but also occasionally in early life. It has been suggested that these lesions should be placed under the category of soft nævi, but this was not borne out in Waelsch's sections. The initial stage of the senile wart is an inflammatory condition of the underlying corium, the inflammation being most marked in the neighbourhood of the hair-follicles and sebaceous glands, and is seborrhoic in nature. The name "senile wart" is unfortunate, as it is not, in the true sense of the word, a wart, but only a condition of acanthosis associated with the underlying inflammation, and is not necessarily senile, as it may occur in young individuals in association with other seborrhoic indications. Instead of "senile wart" the author suggests the name of "Acanthosis verrucosa seborrhoica." He considers that the malignant growth which not infrequently results from these lesions is caused by some unknown irritant acting on the altered epithelium.

J. M. H. M.

ERYTHEMA INDURATUM (BAZIN). THIRD COMMUNICATION ON THE INFLAMMATORY ATROPHY OF THE SUBCUTANEOUS FATTY TISSUE. A. Kraus. (*Archiv f. Derm. u. Syph.*, August, 1905, p. 185.)

This paper is based on four cases of Erythema induratum which the writer had

the opportunity of studying at Professor Pick's clinique at Prague. Histological examination of tissue excised from one of them convinced the writer that the nodules are inflammatory in nature, and that the essential histological change is localised in the subcutaneous fatty tissue, where a circumscribed inflammatory condition goes on to necrosis. He concludes that Erythema induratum is neither a clinical nor a histological entity, but includes a variety of conditions which have one histological feature in common, namely, an "inflammatory atrophy of the subcutaneous fatty tissue."

J. M. H. M.

ON THE MICROSCOPICAL CHANGES IN TUBERCULIN EXANTHEMATA. R. Cranston Low. (*Scot. Med. and Surg. Journ.*, September, 1905, p. 240.)

This contribution is based on a microscopical examination of the skin in three cases of Tuberculin exanthem which occurred in the Breslau Hospital. Case 1 was that of a girl, aged 14 years, suffering from Tuberculosis verrucosa cutis affecting the right foot. Three injections of Koch's old tuberculin were given at intervals of three days. After the first injection ($\frac{1}{10}$ mgm.) a general reaction took place, and a generalised eruption appeared on the trunk and limbs. The second injection ($\frac{1}{5}$ mgm.) was followed by a slight general reaction, a local reaction on the foot, and an exanthem, which was more distinct than that which succeeded the previous injection. The third injection (1 mgm.) resulted in a marked general and local reaction and a change of the exanthem from a small papular eruption to a diffuse desquamating condition. A piece of skin was excised from the back and examined microscopically, when marked cell-infiltration was detected in the corium, forming dense foci around the papillary blood-vessels and sebaceous glands. The deeper foci consisted of small round cells, mast-cells, epithelioid cells and giant cells. Several larger foci were examined for tubercle bacilli with negative results.

Case 2 suffered from Lupus vulgaris. Two injections were given, and after the second (1 mgm.) a red papular eruption resembling Lichen scrofulosorum appeared. This faded in about thirty-six hours. A week after the injection a piece of tissue was excised and examined and showed similar cell infiltration around the blood-vessels and glands.

Case 3 suffered from scrofulodermia, and after an injection of 1 mgm. of tuberculin, which was followed by a local and general reaction, a grouped papular and follicular eruption developed, which was indistinguishable from L. scrofulosorum, and in which collections of cells were detected, containing epithelioid cells and giant cells.

These microscopical appearances raised the question of whether the eruption was the result of toxins or whether the lesions had existed before and were made evident by the tuberculin, and were due to the actual presence of tubercle bacilli in the tissues.

J. M. H. M.

A PECULIAR CARCINOMA OF THE SKIN (CARCINODERMA PIGMENTOSUM — LANG). T. Pollitzer. (*Archiv f. Derm. u. Syph.*, September, 1905, p. 323.)

Multiple primary carcinoma of the skin is a comparatively rare affection.

Still, the various types of it have been more or less carefully described, such as chimney sweep's cancer, paraffin worker's cancer, "cancer of the seaman's skin" (Unna), the cancerous growths in Xeroderma pigmentosum, the cancer which develops from senile seborrhoic warts, and the cancer which results from the ingestion of arsenic. To this group belongs also the unusual case described by the writer of this paper under the heading of "Carcinoma pigmentosum." The patient was a man, aged 52 years, who as a child had peculiar punctiform pigmented macules on the palms of his hands. At the age of twenty-eight he acquired syphilis, which was actively treated, with apparent success. Three years later the carcinomatous affection began as red spots covered with thin crusts which appeared on the nose, chest, then on other parts of the body, and grew gradually into small tumours. Associated with them peculiar pigmented lesions appeared, which were circumscribed, or crescentic, in shape, and here and there coalesced to give the skin a dark-brown tint. The palms of both hands also presented numerous pigmented lesions, which were round or comma-shaped, and either flat, or depressed about 1 mm. below the level of the surrounding skin. The case presented certain points of similarity to Xeroderma pigmentosum on the one hand and Acanthosis nigricans on the other. It differed from Xeroderma pigmentosum in beginning in middle life, in affecting the covered parts of the body, and in the absence of telangiectases, but it resembled that affection in the tendency of the lesions to become carcinomatous. Histologically, the pigmented lesions on the hands presented a singular defect of the stratum corneum over the pigmented area, while the small tumour growths revealed an atypical epithelial growth of a malignant character growing from the basal layer of the epidermis.

J. M. H. M.

CONTRIBUTION TO THE KNOWLEDGE OF THE HYPERKERATOSES. F. Bering. (*Archiv f. Derm. u. Syph.*, September, 1905, p. 379.) One plate.

Clinical observation has led the writer of this paper to doubt the hard-and-fast distinction between Hyperkeratosis congenita (harlequin fetus) and ichthyosis which Unna has taught, and to regard these conditions rather as different degrees of the same pathological process. With the object of trying to decide this problem the writer has made an exhaustive histological examination of tissues obtained from a harlequin fetus and from a case of ichthyosis, and the results of his research are recorded in this contribution. With regard to the histological architecture of the two conditions he has nothing new to add except in connection with the sebaceous glands. He found that where the stratum corneum was thickest the sebaceous glands were most numerous and that they appeared to vary with the degree of hyperkeratosis, being present in considerable numbers beneath the horny masses in harlequin fetus and defective below the furrows between the horny plaques in that disease and also in ichthyosis. The writer made a series of digestion experiments by Unna's method of thin sections of these two affections to find out if the type of cornification was normal. When sections of the healthy stratum corneum from the sole of the foot were digested in pepsin-hydrochloric acid a regular network remained, which was formed by the peripheral portions of the cells which had become keratinised, while the

contents had been destroyed by the digestive fluid. In "harlequin fœtus" a similar network persisted after digestion, showing that the process of cornification was perfect. In ichthyosis, however, the network was less regular, and there was greater difficulty in digesting the cell-contents. The writer concludes that there is probably no definite line of demarcation between the two affections.

J. M. H. M.

CASE OF ACUTE MALIGNANT PEMPHIGUS (P. VEGETANS ?) WITH AUTOPSY REPORT. Oliver S. Ormsby and Peter Bassoe. (*Journ. Cut. Dis.*, July, 1905.)

The authors describe the case of a Jewess, aged 35 years, under the care of Dr. F. H. Montgomery in Chicago. The early involvement of the mouth, followed by the skin lesions, some of which showed signs of vegetation, with the progressive emaciation, weakness, and rapidly fatal termination, all point to Pemphigus vegetans. A history was obtained of soreness of the tonsils and throat of three months' duration, and latterly of the tongue, lips, gums, and nose. The throat and tonsils were found to be red and swollen, and the rest of the mouth and cheeks covered with small vesicles and excoriated patches. The tongue was fissured and bleeding, the teeth loose and in bad condition, the lips fissured, bleeding, and encrusted. Excoriated areas existed on the chest covered with crusts, and one on the chin. Small vesicles were scattered on the chest and posterior surface of both arms, and when ruptured rapidly enlarged by peripheral extension. The skin lesions continued to evolve, and by peripheral extension and coalescence formed burning, painful, large excoriated areas. Some deeper lesions presented early vegetation, especially about the groins. Finally, only the scalp, palms, and soles were spared. The distribution of the lesions did not correspond either with that of spinal segments or nerves. For a time there was a slight evening rise of temperature, and in the last week of life it varied from 100·2° to 106° F. Albuminuria was present, but no visceral changes were detected. During life cultures from the blood remained sterile, and those from the contents of vesicles and from mouth lesions "developed nothing unusual." A first blood count gave 3,800,000 erythrocytes, 12,050 leucocytes, and 80 per cent. hæmoglobin; a later count 5,800,000 erythrocytes, 15,100 leucocytes, and 96 per cent. hæmoglobin. Death occurred in a little over four months after the onset of the disease.

The autopsy revealed acute bronchitis, œdema, and congestion of the lungs; ecchymosis of the pelvic peritoneum; slight interstitial nephritis; partial atelectasis of the middle lobe of the left lung; localised fibrous pleuritis (right); calcification of tracheo-bronchial lymph-glands. Bacteriological and histological research failed to throw any light on the nature of the affection. With respect to the nervous system the small-celled infiltration of the spinal ganglia described in three cases by Marburg could not be found, nor was there proliferation of ependymal cells and displacement of the central canal described by Schrötter. Slight changes in ganglion-cells the authors think due to toxæmia.

T. C. F.

CHRONIC PYOGENIC ONYCHITIS CURED BY THE X-RAYS. G. E. Pfahler. (*Journ. Cut. Dis.*, August, 1905.)

The author records the case of a woman, aged 50 years, who at the age of 16 had

a "run-round" of the left thumb-nail following a needle-wound. At the age of 30 the same nail inflamed without apparent cause for a year. Four attacks of the same nail followed later, and were followed by the re-growth of a good nail. Four years ago a fifth attack occurred in the same thumb and the second finger and resisted all treatment. The nails were lost, the terminal phalanges were much inflamed, and the nail-beds were pustular. Staphylococci were found. X-ray treatment was given thrice weekly with the tube six inches distant, a 2½-inch vacuum, and five minutes' exposure on each finger, using about 1 milliampère (Röntgen ammeter) through the tube. After twenty-five treatments she was well and the nails were growing.

T. C. F.

THE LOCATION OF EXTRA-GENITAL CHANCRES. Douglas W. Montgomery. (*Journ. Cut. Dis.*, August, 1905.)

For a lecture delivered at the University of California Montgomery collects the following statistics:

Percentage of extra-genital syphilitic chancres.—Krefting (Christiania), 15·6; Fournier, (Paris), 9·0; v. Broich (Bonn), 9·0; van Walsen (Amsterdam), 8·5; Mracek (Vienna), 7·5; Bulkley (New York), 5·5; D. W. Montgomery (San Francisco), 5·5; Finger (Vienna), 1·3. Montgomery gives reasons for thinking that these statistics greatly under-estimate the prevalence of extra-genital chancre. In some country districts of Russia the percentage is reported to reach 75 and 80. Owing chiefly to their habits of feeding nearly the entire population of some districts become infected. Chancres of the breast and throat are frequent in Sweden, Russia, and Austria, on the one hand, from the frequent use of wet nurses and the suckling of other people's children, and on the other, from the special habits of feeding and kissing. Of 67 cases of extra-genital chancre in Montgomery's practice the location was noted in 58. Cephalic—Lips, 25; tongue, 3; gums, 1; corner of mouth, 4; tonsil, 1; cheek, 1; eye, 1; neck, 1. Trunk and limbs—Abdomen, 5; breast, 1; nates, 1; anus, 3; fingers, 7; wrist, 1; forearm, 2; back of hand, 1. The lower lip is more frequently infected than the upper.

T. C. F.

REPORT OF A CASE OF FOLLICLIS OF THE SKIN AND CONJUNCTIVA. Henry G. Anthony. (*Journ. Cut. Dis.*, August, 1905.)

The author reports a case which seems to have excited much interest in Chicago and was variously diagnosed. The patient was a male, aged 31 years, healthy, without personal or family history of tuberculosis. Ten years previously small, hard, painful lumps appeared on the skin of the backs of the hands, suppurated, and left scars. Shortly after, and every few weeks, some nodules appeared on the ears, elbows, and then on the face. Seven years ago these outbursts were accompanied by nodules on the conjunctivæ. Four years ago a walnut-sized, ganglion-like tumour formed on the back of the left wrist, disappeared, and reappeared in a persistent form. A similar lesion evolved on the back of the right wrist. These tumours were operated upon, and displayed a tendo-vaginitis with thickened sheaths and serous surfaces thickly studded with polypoid excrescences. The histological examination failed to display "tubercles."

At the time of writing nodules existed on the backs of both hands and fingers, on the lobes of the ears, both elbows, the nose, a patch over the right thigh, and an enlarged gland in the neck. The ears, hands, and feet were scarred. The palms and soles were moist, and in cold weather the ears and hands assumed a livid tint. The lesions evolved as little pea-sized, or exceptionally bean-sized, dermic nodules, gradually forming an acuminate projection, red, and later blue in colour. Some involuted in ten to twenty days without leaving scars, others pustulated, and beneath the adherent crust was a central plug of necrotic tissue. A pea-sized nodule of three days' growth beginning to necrose was examined microscopically. The epidermis only was necrosed. The veins were dilated, filled with coagulated blood, and surrounded by an exudate containing polynuclear leucocytes.

T. C. F.

THE TREATMENT OF ELEPHANTIASIS. By H. C. Curl. (*Journ. Cut. Dis.*, September, 1905.)

Surgeon Curl, of Colon, in a note on the various methods of dealing with elephantiasis, varicose glands, and lymph scrotum, gives a photograph displaying a marked diminution in the bulk of a leg after removing wedge-shaped strips of skin and subcutaneous tissue (transverse and longitudinal) from time to time.

T. C. F.

A CASE OF KERATOSIS FOLLICULARIS. By H. C. Curl. (*Journ. Cut. Dis.*, September, 1905.)

A photograph is reproduced illustrating a remarkable condition of the face, neck, ears, and hands in a coloured man, aged about 28 years, of about eleven months' duration. The lower forehead over the eyebrows, the nose, adjacent cheek areas, the upper and lower lips, and front of chin were most markedly involved and pigmented. The surface was studded with hard, horny "plugs," $\frac{1}{16}$ to $\frac{1}{8}$ in. diameter, often projecting $\frac{1}{8}$ in. from follicles. Their removal left red, gaping craters. Over cheeks, lips, and chin the softer plugs were covered with a foul-smelling crust of epithelium and pus. Elsewhere on the face, the ears, upper neck, and hands the disease was less marked. T. C. F.

SOME NOTES MADE DURING A RECENT VISIT TO THE FINSEN INSTITUTE AT COPENHAGEN. By John A. Fordyce. (*Journ. Cut. Dis.*, November, 1905.)

In *Lupus vulgaris* average daily *séances* of seventy minutes are given to each patient by competent nurses, but the duration of the sitting varies with the individual susceptibility and nature of the disease. A different spot is chosen each day until the reaction from the preceding one has passed away. Pigmentation induced eventually dies away. In lupus of the deeper parts of the nasal and oral cavities or larynx the Finsen light cannot be used because of the impossibility of rendering the tissues bloodless, but it is employed on the mucous surfaces of the lips, eyelids, and on the gums, which are accessible to pressure. Where compression is impracticable the infiltration is treated by the galvanocautery, or locally by the following formula: iodine 1, potass. iodide 2, aq. dest. 2. Lupus of the palate is painted daily or oftener with a mixture of equal parts of

resorcin, balsam of Peru, and mucilage. X-rays are successfully used to heal ulceration, and then Finsen light is applied as more efficient in the removal of nodular infiltration. Months or years may be required to cure an extensive involvement of the skin which is the seat of scar-tissue and relapsing nodules after previous treatment by the curette and caustic.

Keloidal and hypertrophic scars have not yielded to phototherapy.

In *Alopecia areata* it is said the results are encouraging, but evidently not very striking.

Lupus erythematosus is less readily cured by light treatment. To prevent extension of a patch it is well to shield the periphery from the rays by opaque paper. About 50 per cent. of cures have resulted out of 150 cases. A treatment of half an hour daily is generally sufficient.

T. C. F.

DERMATITIS HERPETIFORMIS IN CHILDREN. J. T. Bowen. (*Journ. Cut. Dis.*, September, 1905.)

In a paper read before the American Dermatological Association, June, 1900, and in the *Journal of Cutaneous and Genito-Urinary Diseases*, September, 1901, Bowen reported cases of bullous dermatitis *following* vaccination, since there was no absolute proof of causation by vaccination. Although an erythematous eruption was noted in several cases, the eruption was essentially bullous and vesicular, usually with grouping; the mouth, ears, nose, ankles, wrists, and genitals were regions of predilection. In one case a papillomatous condition supervened. Though resembling Dermatitis herpetiformis in many respects, the eruption was more uniform, and disordered sensation was almost completely wanting. As far as could be ascertained the vaccinations had been performed by a reliable operator with good lymph. Bowen now records nine additional cases of recurrent bullous dermatitis in children, varying in age from three to ten years. In three cases the eruption had followed vaccination immediately, after two and six months respectively. In the remaining cases the clinical type was identical. Looking at the cases as a whole, the essential, striking, and almost constant clinical feature was the recurrence of more or less grouped vesicles and bullæ. Though erythematous and papular conditions occurred in a few cases, multiformity was not a pronounced feature. Further, the sites of predilection already referred to were often picked out. Subjective symptoms, again, were not pronounced. Cultivation from serum and blood failed. Blood examination showed eosinophilia. A diminution of urea was noted in several cases. A vesicle from the ankle was found to be situated in the rete with the papillæ for a floor. The cavity was filled with fibrin, polymorphonuclear leucocytes, with a considerable number of eosinophile and degenerated epithelial cells taking the acid stain. The corium was very œdematous, with dilated lymph-spaces and vessels. In the upper papillary layers, especially about the vessels, there was a striking collection of eosinophile and lymphoid cells with connective-tissue cell-proliferation.

Bowen thinks with Unna that the most important and essential of all the symptoms of Dermatitis herpetiformis is its recurrence. Next comes the tendency to grouping of vesicles (herpetiformity), then the general well-being of the patients, whilst multiformity and subjective sensation are frequent but not necessary accompaniments. In Bowen's cases in children multiformity was absent and

subjective symptoms absent or slightly accentuated. Vaccination is one of probably many provocative agents. The sites of predilection are to be noted. Bowen places Unna's Hydroa puerorum as a distinct variety or an independent affection. T. C. F.

STRIÆ FOLLOWING SCARLET FEVER. Dr. Leopold Bleibtreu. (*Münch. med. Wochenschr.*, September 12th, 1905, p. 1768.)

The patient, a girl, aged 15 years, was admitted into hospital on account of a diffuse bronchitis, with left-sided pleural effusion. Two months after her admission, during which time she had made steady progress, she contracted scarlet fever. The fever ran a mild course. Some weeks later a number of fresh striæ, bluish-red in colour, were noted on the front aspect of each knee and covering an extensive surface on each buttock. The author believes that the occurrence of these striæ after scarlet fever has not been recorded before.

W. B. W.

ICHTHYOSIS CIRCUMSCRIPTA OF THE AREOLA MAMMÆ. Dr. H. Friolet. (*Münch. med. Wochenschr.*, September 19th, 1905, p. 1818.)

The patient, aged 28 years, had just given birth to her first child. An inspection of her breasts showed that each areola was covered by brownish-black pigmented excrescences, which formed a complete circle round the still intact nipple. Deep furrows separated the excrescences the one from the other. There were no signs of inflammation, no weeping nor crust formation.

The disease commenced when she was twelve years old, in the form of isolated, brown, pigmented, wart-like elevations. These slowly increased in number and in size. The patient declared that her mother suffered from a precisely similar affection.

The treatment adopted was to soak the parts with olive oil. After two days the growths were so soft that they could be easily removed. Seven months later there were no signs of a return. W. B. W.

PIROGOFF'S CAMPHOR TREATMENT FOR ERYSIPELAS. Dr. Mayer. (*Münch. med. Wochenschr.*, October 17th, 1905, p. 2031.)

This is a brief note protesting against a statement appearing in a former number to the effect that we do not possess a reliable method for influencing erysipelas. The writer has used Pirogoff's method for sixteen years, and thoroughly believes in it. Pirogoff recommended that doses of 0·15 gr. of camphor should be given every hour, or every two hours, and that the patient should be made to sweat freely by the administration of hot tea. The usual methods of external treatment are also employed.

W. B. W.



Fig. 1.

Dr. Sequeira's Case of Ringworm.

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EXTENSIVE RINGWORM WITH ULCERATION OF THE UMBILICUS.

By JAMES H. SEQUEIRA, M.D., F.R.C.P.Lond., F.R.C.S.Eng.,
Physician in Charge of the Skin-Department and Lecturer on Dermatology at the London Hospital.

Extensive ringworm of the trunk and extremities is not uncommon in certain tropical and subtropical regions, but it is extremely rare in this country, and the cases here described possess so many unusual features that they appear worthy of a somewhat detailed record.

On October 5th, 1905, a boy aged 14 years was sent to me at the London Hospital on account of a large ulcer of the umbilicus. On his being stripped it was at once seen that in addition to the ulcer there was a peculiar scaly condition of the skin of the trunk and extremities which further examination proved to be ringworm.

The boy was born and had always lived in the East End of London, in Limehouse. His father and mother were healthy. The father was a water-side labourer. He had never been abroad, and so far as I had been able to ascertain, there had been no contact with people who had been in the tropics. A sister, aged 21 years, whose case was described later, suffered from the same disease. She had been affected for fifteen years, the boy for eight. No other member of the family had had any skin-affection.

Case 1.—James C—, schoolboy.

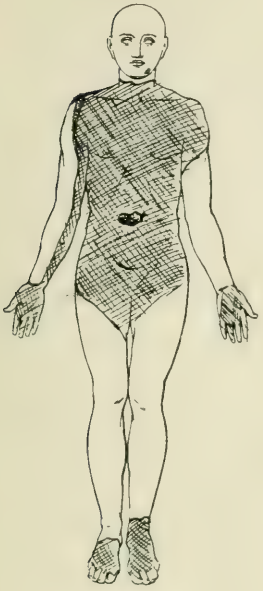
History.—The patient was well until eight years ago, when he was

noticed to be suffering from "ringworms" of the body. So far as I could gather the disease was left untreated and gradually spread until the whole trunk and parts of the limbs were affected. Three years ago he had an illness, said to be scarlet fever, and from this he apparently made a rapid recovery. During the next year a swelling appeared about the umbilicus, and this broke down and formed an ulcer, for which he was treated at a general hospital two years ago. The ulcer was then about the size of a half-crown piece. It was dressed with ointments and apparently healed up, but speedily broke down again and had given trouble ever since. In July, 1905, it began to enlarge, and in October he was brought to the London Hospital. It will be at once obvious that very little attention had been paid to the boy's health, and the conditions under which he had been living were very bad.

On admission to the hospital the most striking feature of the case was a large reniform ulcer at the umbilicus. The ulcer was nearly three inches in its transverse diameter and an inch and a half vertically. The margin was greatly thickened and indurated and the edge undermined. In parts a probe could be passed under the edge for one third of an inch. The ulcer was half an inch deep in the middle. The base was irregular and covered with a yellowish-brown, moist slough. There was a thin, yellowish, purulent discharge. On the right wrist there was a circular infiltrated patch the size of a penny. This resembled a local tubercular infection. It had never ulcerated.

The skin of the whole of the trunk was scaly. The scales were small, adherent, and of a brownish tint, and on close inspection raised red lines of papules in rings could be seen. These were most marked on the abdomen and lower part of the chest. In front the upper margin of the eruption crossed the neck at the level of the thyroid cartilage. It extended on to the shoulders, and on the left side involved the deltoid region and on the inner side extended into the axilla. On the right side the deltoid region escaped, the eruption forming a narrow band from the axilla to the wrist, where it spread out and covered the wrist and hand, back and front, and all the fingers. On the left side the wrist, hand, and fingers were affected similarly, but the rest of the limb was free. From the abdomen the eruption spread on to both thighs, which were affected symmetrically. The lower margin of the eruption crossed obliquely from the level of

Fig. 2.



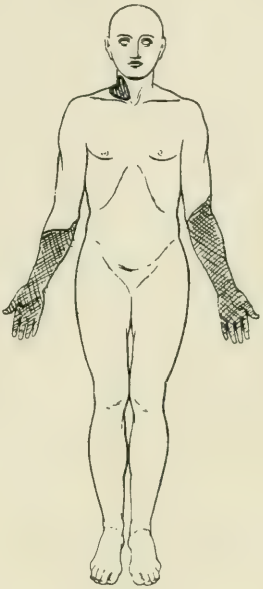
James C— (front).

Fig. 3.



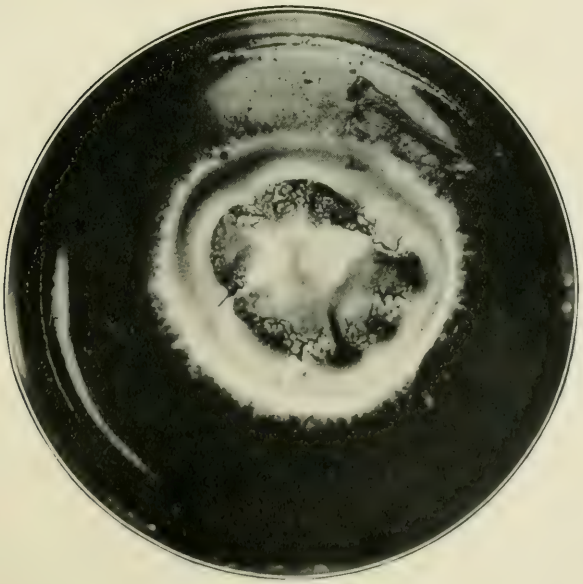
James C— (back).

Fig. 4.



Helen C—.

Fig. 5.



the great trochanter to the middle of the inner border of the thigh. The rest of the lower limbs was free until the dorsum of the feet was reached. Here the scaly eruption was present on both sides, but more extensive on the left than on the right.

On the dorsal aspect the upper border of the eruption crossed the neck at the level of the vertebra prominens. Laterally it extended on to the shoulders, but to a greater degree on the left side than on the right. Below it reached the gluteal fold on the left side, but was bounded on the right by an oblique line across the right buttock. The whole of the dorsal aspect of the lower limbs was free.

All the finger-nails were rough, thickened, opaque, and of a brownish tint in their distal parts. The thumb-nails were also involved but to a less degree. The toe-nails were unaffected. With the exception of a small patch the size of a shilling on the left side of the chin, the face was free. The scalp and hair were also unaffected. (Figs. 1, 2, and 3 illustrate the distribution.)

The eruption itched a great deal and the boy was constantly scratching.

The patient was well developed, but thin and anæmic. There was no evidence of visceral disease.

Scrapings taken from the skin and nails showed a large quantity of mycelium and some spores. The fungus did not differ microscopically from the common endothrix. Some of the exudate from the ulcer was examined by Mr. Twort in Dr. Bulloch's laboratory, and he obtained pure cultures of the fungus.

Dr. Colcott Fox was kind enough to make cultivations from some of the material, and he reports that the fungus is undoubtedly the endothrix. By his courtesy I am enabled to reproduce a photograph of one of his cultures. The colour is pale buff and the crater is well marked (Fig. 5).

There seems to be little doubt that the ulcer at the umbilicus was caused by the fungus. I look upon it as allied to kerion, though the extent and depth of the ulcerative process may have been influenced by secondary infection with pus-organisms. Microscopical sections of the edge showed a simple inflammatory infiltration.

Case 2.—Helen C—, aged 21 years, paper-sorter. This patient was sister to the boy. She had had good health, but, like him, was anæmic.

When she was six or seven years old a small round spot the size of a shilling was noticed upon the left forearm, just below the bend of the elbow. It was treated as a ringworm, but in spite of the application of ointments the disease had spread and finally both forearms were affected. Well-defined patches were present upon both forearms and hands, and also on the right side of the neck (Fig. 4 illustrates the distribution). The finger-nails showed the same characters as those of the brother. There had never been any patch on the trunk, and there had been no infiltrated and ulcerated spots. The scalp and hair had been quite free. Cultivations from this case showed the same features as in the other. It had been very difficult to treat these cases. The girl would not leave her work. The boy was in the ward for some months, and the ulcer healed up under fomentations of boric acid and lysol. Iodine 1 in 12 was the most satisfactory application to the scaly eruption. The parents absolutely refused to allow the infected nails to be removed, and all that could be done to check the spread by scratching was to keep the hands and fingers in dressings. After four months' treatment the conditions were much improved, and then the patient was removed from the hospital, and when seen again some months later the ulcer had again broken down and the skin-eruption was nearly as widespread as before. I have recently seen the boy again, and hope that I may induce the parents to let me have him in hospital once more for removal of nails and further treatment.

AN EXPERIMENTAL STUDY OF SOME CASES OF URTICARIA.

By W. ERASMUS PARAMORE M.A., M.B.

(*Continued from page* 248.)

Case 9.—W. E. P—. Attempt to decalcify the blood by administration of oxalic acid, resulting in a papular urticaria.

June 26th, 1905.—Coagulation time, 1 min. 5 secs. Complete decalcification with a dilution of $\frac{1}{900}$ oxalate of ammonium. R Oxalic acid, gr. x, *t. d. s.*

June 27th.—Coagulation time, 37 secs. Complete decalcification

with a dilution of $\frac{1}{1200}$ oxalate of ammonium. Incomplete decalcification with a dilution of $\frac{1}{900}$ oxalate of ammonium. R Oxalic acid, gr. x *b. d.*

June 28th.—Coagulation time, 25 secs. Complete decalcification with a dilution of $\frac{1}{2400}$ oxalate of ammonium. Incomplete decalcification with a dilution of $\frac{1}{1800}$ oxalate of ammonium.

June 29th.—Coagulation time, 1 min. 7 secs. Complete decalcification with a dilution of $\frac{1}{1500}$ oxalate of ammonium. Incomplete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium.

June 30th.—Coagulation time, 55 secs. Complete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium.

July 3rd.—Complete decalcification with a dilution of $\frac{1}{900}$ oxalate of ammonium.

July 12th.—Complete decalcification with a dilution of $\frac{1}{1800}$ oxalate of ammonium.

Case 10.—J—. Attempt to decalcify the blood by the administration of oxalic acid, not resulting in urticaria.

June 20th, 1905.—4.30 p.m. Coagulation time, 1 min. Complete decalcification with a dilution of $\frac{1}{2400}$ oxalate of ammonium. Incomplete decalcification with a dilution of $\frac{1}{1050}$ oxalate of ammonium. 4.45 p.m., R Acid oxalic, gr. x.

June 21st.—Coagulation time, 37 secs. Complete decalcification with a dilution of $\frac{1}{1050}$ oxalate of ammonium.

June 26th.—Coagulation time, 48 secs. Complete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium. R Acid oxalic, gr. x, *t. d. s.*

June 27th.—Coagulation time, 28 secs. Complete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium. Incomplete decalcification with a dilution of $\frac{1}{900}$ oxalate of ammonium.

June 28th.—Coagulation time, 48 secs. Complete decalcification with a dilution of $\frac{1}{1500}$ oxalate of ammonium. Incomplete decalcification with a dilution of $\frac{1}{1200}$ oxalate of ammonium.

June 29th.—Coagulation time, 53 secs. Complete decalcification with a dilution of $\frac{1}{1500}$ oxalate of ammonium.

June 30th.—Coagulation time, 45 secs. Complete decalcification with a dilution of $\frac{1}{2400}$ oxalate of ammonium. Incomplete decalcification with a dilution of $\frac{1}{2100}$ oxalate of ammonium.

The study of the foregoing cases affords evidence that in urticaria the calcium factor of the blood is an element of primary importance. Though in the cases examined no large diminution in the lime content was registered as compared with the presumed normal, yet in Cases 1, 2, and 6 an exaltation of blood coagulability, brought about by the exhibition of a calcium salt, led to almost immediate recovery (*i. e.* one to two hours).

Case 3 is brought into line with the former cases in that at the onset of an attack a reduction of the lime content by one half was recorded. The exhibition of a calcium salt, resulting in the restoration of the lime content, led again to recovery.

In Cases 7 and 8 no further observations were made, but they are presumed to be of the same type as Case 3, in that, though some lesions were visible, the examination took place during an interval between two attacks. Hence the necessity of continued observation in cases in which the disease is presumed to be of a decalcification type.

Again, in Case 6 a papular urticaria was converted into one consisting essentially of wheals, by the exhibition of a decalcifying agent, citric acid. In the same case an urticaria of a wheal type was reconverted into one of a papular variety by the administration of calcium. I have lately seen two similar cases. Milk has been shown to be one of the chief sources of calcium in the food supply, large milk drinkers being possessed of a blood characterised by an abnormally large lime content associated with a proportionately accelerated coagulability.* Parallel with this observation it is found clinically that in children a papular urticaria is of frequent occurrence.

Again, the value of a milk dietary in cases of chronic urticaria has been pointed out by Stelwagon.† It is probable that its utility depends, not only on the diminished strain that is imposed on the excretory functions of the kidney by the diminished ingestion of nitrogenous materials, hence enabling the organ to deal more completely with toxic and other waste products already present in the circulating blood, but also on the calcium element as a resultant of which an

* "Exaltation of Diminution of Coagulability of the Blood by Therapeutic Measures," *Lancet*, October 14th, 1905, p. 1096.

† "Urticaria." *Diseases of the Skin.*

increased viscidity of the blood associated with an acceleration of coagulability should obtain.

Further, Stelwagon recommends antacid magnesia as a drug of considerable therapeutic value in all forms of urticaria.* In explication it is found that magnesium has after ingestion an exactly similar effect on the lime content of the blood as compared with calcium, a corresponding exaltation of coagulability being obtained. Moreover, in the event of calcium being badly absorbed or retained by the individual magnesium is found to have for that individual a correspondingly increased effect.†

In Case 6 it has already been pointed out that the administration of a saline purge—that is to say, the sulphate and carbonate of magnesia—led to a direct increase in the lime content of the blood in spite of the previous ingestion of decalcifying substances. The value of such a purge in the more common cases of urticaria needs no demonstration. Clinically in many people the ingestion of sour fruit, unripe apples, sour wines, etc., is followed by an urticaria.

It seems therefore permissible to consider that an attack of urticaria may be directly due to a diminution in the content of the blood in lime salts associated in consequence with defective blood coagulability—that is to say, is of the nature of a serous hæmorrhage, a decalcification urticaria (Wright).

That such a condition of the blood does not in the majority of cases mean urticaria is more easy of proof. In Table II will be found a number of cases taken almost at hazard from among patients examined who at no time have exhibited symptoms of the disease so far as I was able to discover.

In Case 9, an urticaria of a papular type directly produced by the ingestion of oxalic acid, reasons are offered for the suggestion that the calcium element of the blood was precipitated by the unbroken oxalic acid molecule as an oxalate of calcium.

In the event of a kidney, not too perfect in action, being called upon to perform its excretory functions, and having to deal with a blood so loaded, it is possible that, finding itself unequal to the task, it may refuse action or perform that action only in part, throwing

* "Urticaria," *Diseases of the Skin.*

† *Lancet*, October 14th, 1905, p. 1096.

TABLE II.

Case.	Date of examination.	Coagulation time.	Dilution of oxalate of ammonium in physiological salt solution which just sufficed to effect complete decalcification of the blood.	Remarks.	Observer.
R.	Feb. 23, 1905	1 min. 25 secs.	$\frac{1}{2000}$	Normal man	W. E. P.
H.	May 16, 1905	2 mins. 22 secs.	$\frac{1}{1800}$	Normal man	W. E. P.
G.	Mar. 3, 1905	2 mins. 5 secs.	Incomplete at $\frac{1}{3000}$	Hæmophiliæ	W. E. P.
S.	April 19, 1905	2 mins. 10 secs.	$\frac{1}{1100}$	Patient under treatment with citric acid	W. E. P.
R.	April 26, 1905	2 mins. 5 secs.	$\frac{1}{1200}$	Ditto	W. E. P.
G. B.	Feb. 11, 1905	2 mins. 10 secs.	$\frac{1}{1000}$	Patient with lupus	W. E. P.
Rd.	June 19, 1905	40 secs.	$\frac{1}{2400}$	Normal man	W. E. P.

back upon the skin the duty of eliminating such products as it itself is unable to deal with. Should the noxious material be capable of easy and quick excretion by the cutaneous glands, little but a transitory hyperæmia can follow, but in the event of the skin being incapable of such adequate excretion the continued hyperæmia will be followed by a round-celled and a serous exudation.

In the event of the material to be excreted being of highly irritative or toxic nature, a serous exudation in considerable quantity is poured out, constituting a wheal; in the event of a comparatively unirritating particle, such as a crystal of oxalate of calcium, the serous exudation should be relatively small, and therefore no visible lesion or a papule at most should result.

In the case of de V. K—, in whom presumably the urticaria was of this nature, it was shown that decalcification of the blood resulted in a greater outpouring of serum, a wheal being produced as contrasted with a previous papule.

It may be that many of the cases classed under the title of decalcification urticaria were primarily produced in this way, but the toxic material which certainly exists in a vaccine, for instance, having been eliminated, the condition may quite conceivably be kept up by the decalcified condition of the blood, and, therefore, directly such a blood condition is rectified recovery quickly follows.

Following this line of thought, a papular urticaria should be inflam-

matory in origin. If, in addition, a decalcified condition of the blood is present, resulting in defective coagulability, the lesions will not be of a papular type, but be characterised by the presence of wheals. Hence, in a case of this type the exhibition of calcium will not result in recovery as in a pure decalcification urticaria, but will result in the production of the papular variety. But a papular urticaria may exist with a decalcified condition of the blood, provided that some other factor is present which directly leads to an exaltation of coagulability (Case 9).

The essential point to be noticed in these cases is not solely the quantum of lime registered on examination, but the relation between the former and the coagulation time in the event of the latter being prolonged in so far as to constitute a serous hæmorrhage, the lime content of small magnitude, a considerable augmentation may be determined by the exhibition of calcium. In a decalcification urticaria a cure will result, in a second form a papular urticaria, with considerable alleviation of symptoms, and in the last group, as evidenced by Cases 4 and 5, no appreciable alteration will be registered.

Of interest in this connection is the observation that on one occasion in Case 4 an abnormally large salt content (hæmosozic value) of the blood was found (unfortunately, the sole occasion on which an investigation into this factor was made in any of the cases examined). In my contribution to Dr. Graham Little's paper on "Urticaria Pigmentosa" experiments are offered which tend to show that a large salt content of the blood is conducive to hæmorrhage, that in patients possessed of such a salt content hæmorrhage is common, and, lastly, in a blood possessed of a large lime and salt content if the lime content be reduced the salt content will now be too large for efficient clot-formation, and in consequence hæmorrhage may be expected.

It is, then, possible in the future that the causation of many obstinate forms of urticaria may be found to lie either in the salt content or the interrelation between the lime and the salt content.

This point is of interest in relation to the urticaria which is produced in some people by sea-water bathing.

That an urticaria should develop in one man while no such manifestation is apparent in another exposed to the same conditions may, then, quite well depend upon the ease with which toxic and decalcifying substances are excreted by their respective kidneys.

Apropos of such an hypothesis, Wright has shown that in renal insufficiency the salts excreted in the urine are equal or perhaps one third of the quantum of salts present in the blood, in contrast with a normal kidney in which the salts excreted are found to be two or three times in excess of the quantum found in the blood.

Clinically it is found that in renal disease, gout, etc., urticaria is a frequent complication. For the relief of such a condition therapeutic measures must be directed, not against the urticaria, but with a view to aiding directly the excretory power of the kidneys.

An urticaria the result of insect bites, contact with plants—*e. g.* the stinging-nettle—is necessarily local, limited by the area in contact.

Such a condition cannot be considered as a resultant of a modification of the blood as a whole, as in the previous types of urticaria considered; a local alteration must be sought—not in the blood-stream, for such a condition would quickly communicate itself to the whole and a general condition result—but in the tissues in the immediate neighbourhood of the surface in contact. In effect an infinitesimal dose of highly irritative or toxic substance is introduced into the minute lymph-spaces found in the neighbourhood of the dermal papillæ. These spaces are extremely small, drained by still minuter channels, so that a rapid washing away of their contents is impossible. The osmotic pressure in such a lymph-space will necessarily be modified by the sudden addition to it of a concentrated toxin. In consequence, an influx of serum from surrounding parts, in which a lesser osmotic pressure obtains, will be determined until such time as the toxic substance has been so far diluted that the tension in its neighbourhood is equal to that in surrounding parts. Hence a wheal is produced—the rapid accumulation of serum under pressure tearing apart the tissues in the neighbourhood brings with it pain. The toxic substances having been in such manner rendered dilute, resolution is able to take place and recovery occur. In support of such an argument it is found that nettles when wet have no action in producing an urticaria.

In conclusion, I trust that the narration of the foregoing cases, though small in number, are yet sufficient to afford evidence that many cases of urticaria are due rather to an alteration in the blood-constituents than to any acquired or inherent alteration or degeneration of the cutaneous tissues or vessels. That a degeneration or

misapplication of a nervous mechanism may be a factor in the causation is exemplified in a case quoted by Wright ('Path. Soc. Trans.,' vol. li, Part III, 1900), a medical man who was able by force of will to bring out a rash on his arms at pleasure. In this case recovery resulted, not by any treatment directed to the nervous system, but by the administration of tabloids of thymus gland. As explanation of this result Wright considers that by exertion of the will the patient was able to direct a very much greater flow of blood to the skin; this blood having an abnormal chemical constitution produced the subsequent lesions. Urticaria may, then, in consideration of the altered relationship of the chemical constituents of the blood, be divided into three main groups:

(1) Decalcification urticaria.

(2) Urticarias due to an alteration of the salt content of the blood.

(3) Inflammatory or toxic urticarias: general, *e. g.* papular; local, *e. g.* due to nettles, insects, etc.

It is probable that these main groups are divided by no sharp line, that one may pass into another or two be combined.

As secondary factors, adjuvants or perhaps determining causes—acquired or inherited degeneration or alteration in the skin—cutaneous vessels or nervous mechanism may play a certain part.

Finally, I must express my indebtedness to Dr. Wright for guidance in the conduct of the experimentation, the ready permission to make use of the observations that were taken in three of his cases (S—, M. H—, and F—), chiefly by myself, but also in part by him, for the use of his methods, and the perusal of his published papers, and to Dr. Graham Little for permission to examine the cases T. H— and W. M—.

SOCIETY INTELLIGENCE.

THE DERMATOLOGICAL SOCIETY OF LONDON.

An ordinary meeting of the above Society was held at 11, Chandos Street, W., on Wednesday, July 11th, 1906, Dr. H. Radcliffe-Crocker in the chair.

Dr. Colcott Fox presented a man, a clerk, aged 24 years, sent to him by a medical man *for diagnosis*. When first seen, on July 4th,

the patient said that, whilst enjoying good health, he noticed about two dozen spots, which he called "sores," dotted about the buttocks, trunk, and limbs, about Friday, June 22nd. On June 29th a generalised eruption burst out over the trunk and limbs to the finger- and toe-tips, without any constitutional symptoms. When seen on July 4th this exanthem-like eruption was very copious, but discrete, of a fresh, pink colour, slightly raised and infiltrated, forming maculo-papules, most of them of a large miliary type and suggestive of a copaiba rash. A proportion of the lesions were slightly scaly. They were not conspicuously follicular in type. They were very itchy at night. On the palms and soles the eruption was copious, and about the fingers and toes were large, clear vesicles. The throat appeared to be congested, and in the right groin only were some enlarged "bullet" glands. The scalp had been slightly pityriasic for years, and the face was, perhaps, a little roughened, but otherwise free from eruption.

In demonstrating the case at his clinic the exhibitor passed in review the possibility of Pityriasis rosea, Pityriasis rubra pilaris, acute follicular psoriasis, acute Eczema seborrhoicum, and a drug-rash. There was no trace of any syphilitic chancre, and the patient said he had not been exposed to risk of this affection for a year. He had been enjoying good health and had taken no medicine. Pityriasis rubra pilaris was most improbable, as the eruption on the trunk was not markedly follicular, and the vesiculation of the hands and feet was against it. He thought that it might possibly be an unusual, very acute outburst of Pityriasis rosea, although he had never observed vesiculation in this eruption. The condition of the scalp raised the question of Eczema seborrhoicum. It was impossible, without further observation, to be sure of the diagnosis.

On July 11th, the date of exhibition, the light, rosy colour had somewhat dulled. The lesions had increased slightly in size and were rather more scaly. On the abdomen the eruption was partially confluent, forming a lace-work, as seen in Parakeratosis variegata. On the upper arms the lesions were small, roughened macules, suggestive of Pityriasis rosea. The vesicles on the hands and feet had entirely disappeared. The glands in both groins were obviously enlarged, of the "bullet" type, and also in the axillæ and on the chest on the border of the pectoral muscles.

Postscript.—Dr. Arthur Whitfield was kind enough to examine some scrapings

of the lesions, and reports that there were no bottle bacilli or cocci present. The cells, except a few deeper ones, were not nucleated. The desquamation appeared to be a secondary process, and the absence of the above-mentioned organisms was sufficient, in Dr. Whitfield's opinion, to exclude any form of seborrhoic dermatitis.

N.B.—Dr. Fox reports that he saw the case again on July 18th, and that the eruption was fast disappearing, leaving slight desquamation. No treatment beyond a zinc lotion had been used.

Dr. Wilfrid Fox presented a case of *Adenoma sebaceum* in a boy aged 12 years. The eruption appeared first at the age of three, and coincided with the commencement of epileptic fits, which rapidly became very severe and continued for several hours at a time. During the last three years there had been no fits, but the boy was mentally defective, and was being educated at the special school for idiots. The eruption was in the characteristic situation on either side of the nose, and on the chin, a few scattered papules were seen on the cheeks and forehead. It was of the vascular or "Pringle" type, and had become brighter in colour and more evident during the last two years. There was in addition a fine purpuric rash scattered all over the trunk and legs, which appeared a fortnight ago and was now fading.

Dr. Radcliffe-Crocker demonstrated the presence of several fibrous nodules on the back, which are frequently seen associated with this disease.

Dr. Galloway brought forward the case of a lady, aged 48 years, suffering from an unusual form of vesicating and scar-leaving eruption affecting the face and extremities.

The eruption had been first noted during the autumn of 1905, but as it was comparatively slight had attracted little notice. During the winter it had gradually increased and had been seen by Dr. Galloway in consultation on March 5th of the present year. The condition then consisted of erythematous and vesicating lesions of varying size affecting the face, both cheeks being very symmetrically involved, the ears, the arms, and hands, especially the backs of the hands and the corresponding surfaces of the phalanges, the backs of the forearms, and the points of the elbows; the lower extremities were also affected to a considerable degree in situations corresponding to those referred to on the arms, viz. the extensor surfaces of the legs and feet and the front of the knees. The trunk was free from eruption. The early lesions resembled closely those produced by the

vesicating form of Erythema multiforme, some were distinctly of the "iris" type; these were, however, the smaller ones, and not greater than about a quarter of an inch in diameter. These smaller lesions tended to coalesce, forming areas with circinate outlines, of which marked examples could be seen symmetrically on both cheeks. These larger lesions showed a distinct tendency to ulcerate, and even to show a small quantity of fungating granulation tissue. At this time Dr. Galloway had the advantage of the opinion of Dr. Colcott Fox on the case, and some difficulty had been felt by both in forming a definite diagnosis. An opportunity was subsequently afforded to Dr. Galloway of making a careful examination of the patient's general condition. No visceral lesion had been found; especially no trace of albuminuria was found, nor were signs of disease of the kidneys or liver, or alimentary tract noted. The patient was a spare, small woman, and had recently been overburdened with domestic anxiety.

Treatment was arranged so that the patient should obtain rest. The local lesions, which were numerous, were cleansed and dressed with a protective paste of zinc oxide, and after a short time the patient was sent to a sanatorium in the country. Internal treatment consisted in the use of courses of salicin, 30 gr. daily for ten days, followed by an intermission of five days during the months of April and May.

Till about the middle of May little change was noted in the patient's condition, but recently there has occurred a steady improvement. The eruption recurred less frequently, and the ulcerations which were present were gradually healing. Distinct loss of tissue had occurred, and in the place of many of the lesions a fine scar could be observed. The scars could be seen chiefly on both cheeks and on the ears.

The difficulty in diagnosis arose in determining whether the condition should be considered as an unusual variety of Erythema multiforme or an example of the ill-defined group of eruptions of the type of Hydroa vacciniforme. During the early part of this attack the resemblance to Erythema multiforme of severe type was very close, but the peculiar scarring of the skin resulting from the vesicating lesions left little doubt that the case is an example of the Hydroa vacciniforme group, which is generally recognised to contain many aberrant forms.

Dr. Graham Little showed :

(1) A case of *sclerodermia* in a little girl aged 5 years. The disease had commenced upon the scalp eighteen months ago and had been at first mistaken for ringworm. The child had now marked hemiatrophy of the face on the left side and sclerodermic areas in the following situations : (1) A linear patch extending from the centre of the vertex of the scalp to the forehead ($1\frac{1}{2}$ by $\frac{1}{2}$ inch). With the exception of a small break in this line, in an area the size of a threepenny-bit on which the hair was normal, the line was continued on the forehead to the eyebrow. The upper section of this line (that on the scalp) was a dead white and depressed below the general surface; in the lower section of the line, on the forehead, it was a buff colour, and also depressed. Similar yellowish, shiny, slightly depressed patches were present (2) on the inner and left side of the nose, (3) the skin of the inner canthus of the eye, (4) below the eye, (5) the cheek, (6) the upper lip in its left half, (7) the left half of the chin, and (8) on the left side of the neck. On (9) the left side of the body in the mid-axillary line and just above and parallel to the crest of the ilium there was a lozenge-shaped patch of shiny, white, depressed, sclerodermic skin ($1\frac{1}{2}$ inches by from $\frac{1}{2}$ to $\frac{3}{4}$ inch in area). On (10) the left buttock there was a large patch shaped roughly like an hour-glass (4 by $2\frac{1}{2}$ inches). This was brownish, shiny, and depressed. There was unusually copious and long hair all down the intervertebral groove. The child was not ill in other ways, and there were no nervous symptoms. She had been treated for a considerable time with thyroid extract with no noticeable benefit.

(2) A case of a *gyrate syphilide* in a woman aged 60 years. She had had the eruption for the past four years, and had not apparently been treated at all. She had had two miscarriages and two still-births, but these had been separated by healthy pregnancies. She had not at any time had secondary symptoms. At the present time she had a thin, sinuous, red, scaly line on the right thigh, bounding an area of skin which had probably been infiltrated, and was now a darker colour than that of the normal skin. This patch had been apparently of the size of a man's hand, but she could give no history of its existence. In the near neighbourhood of this large patch there were now several smaller circinate patches with a similar red, scaly

border and darkened centre. In some of these the border was made up of nodules. Upon the left forearm there were similar circinate patches. The duration of the patches was remarkably protracted.

(3) A case of a *rodent ulcer* in the inner canthus of the left eye of a man aged 45 years, who had had the ulcer for twenty-five years. He had been under treatment at St. Mary's Hospital for two years with X-rays, and the lower half of the ulcer had completely healed. But the upper portion had remained ulcerated, and within the past fortnight he had developed on this upper portion a tumour the size of a Barcelona nut, the character of which was doubtful, and the case was shown to obtain opinions on this point. The tumour was exceedingly hard, and on pricking it deeply with a needle no fluid had been voided, only blood. It now blocked up the left eye almost entirely, and was growing rapidly larger. (This proved on histological examination to be epithelioma.)

Dr. J. M. H. MacLeod showed a case of *Granulosis rubra nasi*, previously exhibited by him to the Society in March, 1903 (*Brit. Journ. of Derm.*, 1903, xv, p. 197). The patient was now ten years of age. The condition of his nose had not markedly changed since he was last shown so far as the localised sweating was concerned, but the red micro-papules which characterised the lesions at that time, and which suggested at first sight the diagnosis of *Lupus vulgaris*, had to some extent disappeared. The case had been kept under observation at the Victoria Hospital for Children since it was first brought up there in 1903, and any change in the state of the local lesion and the general health of the patient had been noted. About a year ago a cast was taken of his mouth on account of his having defective teeth, and, as a result of the reflex irritation caused by the taking of the impression, the nose became much worse; it became inflamed, covered with perspiration and small vesicles, and the skin became macerated and tended to peel off. The inflammation persisted in the nose for about a fortnight. Recently the boy had become subject to attacks of hyperidrosis of the palms and soles, and when exhibited the skin of the palms was red, glossy, and thickened as the result of an attack from which he was recovering.

(2) A case of *Keloids* in a man aged 55 years. The patient was a French-polisher by trade, and was of a somewhat nervous disposition. He presented a number of keloids of various sizes. The largest was

present in the common situation across the sternum. It was irregular in shape, about 6 × 3 inches in size, and of a bluish-white colour. In the centre it was depressed, and it was limited by a raised cartilaginous border. Surrounding it there was a vivid halo of inflammation about three quarters of an inch broad and fading into the surrounding skin. In the neighbourhood of this lesion there were several smaller keloids. Two typical keloids were also present on the left shoulder, which were narrow in the centre and spread out at the ends, and there was a third present in the interscapular region. The lesions were associated with violent itching, which interfered with the patient's sleep. The keloid on the sternum had first appeared six years before and began as a small nodule, there being no history of injury or previous lesions on that situation. The other keloids had developed without any apparent cause. It was proposed to treat one of the keloids with X-rays and another with thiosinamin injections and to compare the results.

Mr. George Pernet showed (1) a young man, aged 21 years, with localised *Ichthyosis hystrix* (Papilloma lineare) about the hands and at the bend of the right elbow. He had been treated by scraping with a Volkmann sharp spoon followed by the application of pure phenol. Dr. Radcliffe-Crocker had sent the case into the hospital for operative treatment, and by his kindness Mr. Pernet was able to show coloured drawings of the condition before sharp spooning. [In these drawings there was too much redness about the parts affected.] The horny excrescences were markedly raised above the level of the skin and were very tough, requiring vigorous use of the spoon to detach them from their base. According to the patient the condition had been present fifteen years, and had been frequently treated by cauterisation. He stated also that the lesions at the bend of the elbow had followed an abscess, and there was a small scar in the right forearm, the result of another smaller abscess. This raised the question of Lupus verrucosus, as pointed out by some of the members present. When the case was seen in its original condition the appearance certainly pointed to Ichthyosis hystrix and not to Lupus verrucosus. Up to the present the result of treatment had been satisfactory, but it might be added that Ichthyosis hystrix treated in this way had a tendency to reassert itself. Since scraping, Empl. acidi salicylici had been applied to small portions of parts treated.

(2) A culture from a case of *Tinea tropica inguium*. The patient (who was not shown) was a young lady, aged 21 years, and had lived in China in her childhood. The finger-nails had been affected for six years or so, viz. the right index and middle and also to some extent the right little finger-nail. The other nails were smooth, as also those of the left hand, but presented white striæ (leuconychia). In addition, the dorsal aspects of the feet were affected, where there was a somewhat circinate-edged red eruption. All the toe-nails were crumbling, with only small portions of them left. A brother also had diseased finger-nails. For these clinical details and the opportunity of showing a coloured drawing of the finger-nails, Mr. Pernet was indebted to Dr. Radcliffe-Crocker. Mr. Pernet had examined scrapings from the finger-nails and found segmented mycelia. Scrapings from the dorsum of foot showed abundant long, slender, dichotomously branching, mycelial elements, but an examination of the toe-nail scrapings had been negative. Tubes were inoculated, but from the finger-nail material alone were cultures successfully grown. On glucose agar at room-temperature and in the dark growth had very slowly taken place since February 15th of this year. Now the culture presented the following features: a pale pinkish disc with central knob and delicate radiating fringe at the periphery. Mr. Pernet had obtained a somewhat similar culture in the case of a *Tinea tropica* of the skin of Chinese origin. He considered the fungus came into the category of Trichophyton megalosporon endothrix. This made the third successful culture of endothrix from nails.*

(3) A Rosella parrot of Australia (*Platycercus eximius*) exhibiting numerous lesions about the body looking very like Molluscum contagiosum growths. The bird had been sent from Sydney by Dr. McMurray of that city as a case of acarus infection. On teasing out contents of lesions this was found to be the correct diagnosis. Although at first sight the growths had suggested Molluscum contagiosum (Epithelioma contagiosum of German authors), which affects birds (pigeons, buntings, etc.), the lesions were really acarus-nests, being crowded with ova and acari in various stages, with numbers of inchoate larvæ, the most highly developed individuals having only attained to the dignity of two anterior pairs of legs. All had a yellowish tint. There were no six-legged larvæ, eight-legged nymphs,

* *Vide Brit. Journ. Derm.*, July, 1906, p. 252.

or sexually differentiated adults in the teased preparations which Mr. Pernet had looked through. The examination demonstrated the fact that the two anterior pairs of legs were the first to develop. Mr. Pernet also showed a stained section of a nest (hæmatoxylin-eosin), in which a larva had been caught by the knife showing the head with the two anterior pairs of legs and the rest of the body very well. As to the nest, it lay just under the epidermis and was divided up by delicate septa into compartments; it was more or less oval in section.

According to Mégnin the female *Sarcoptes minor* (of rodents) does not burrow, but makes a nest just beneath the epidermis, in which she remains immobile and lays her eggs. The appearance of the acarus observed in the Rosella parrot did not correspond apparently to *Sarcoptes mutans*, which affected the legs of fowls, nor to *S. mutans* variety *levis*, which attacked their bodies—that was, as far as Mégnin's figures represented them.

Note.—Through the courtesy of Professor E. Ray Lankester and Mr. Calman (of the Natural History Museum) I am able to give further details concerning the Acari found in the skin of *Platycercus eximius* (Rosella parrot of Australia). An excised acarus-nest was submitted to Professor Trouessart, of the Muséum d'Histoire Naturelle, Paris, who states that the Acarus is a species of *Cheyletina*, genus *Sarcoborus* (Oudemans, *Entom. Berichte*, 1904, No. 17, p. 154). The Acarus probably belongs to the species *Sarcoborus crista-galli* (Berlese and Trouessart, *Bull. Biblioth. de l'Ouest*, 1889, ii, p. 139). As Professor Trouessart could not find a male, but only females and young acari, he cannot speak positively on this point. The male acari are few and far between. The acari, he states, live in the subcutaneous tissues on the fat, hence their yellow colour.—G. P.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

A meeting of this Society was held on June 27th, 1906, Dr. Leslie Roberts, President, in the chair.

The following cases were exhibited:

Dr. Alfred Eddowes showed a case of *Ulerythema centrifugum*, which possessed some special points of interest. The patient, a young married woman, had lost her husband ten months ago, of "erysipelas." Within a week after his death she noticed a small, red, well-defined swelling on the centre of her left cheek. Soon afterwards a smaller one appeared to the left and above it, about

an inch below the external angle of the eyelids. When Dr. Eddowes saw her first, although there was no general erythema of either side of the face, he diagnosed it as an unusual, deep, and œdematous form of Lupus erythematosus. A small portion of skin was excised from the larger patch and microscopically examined. Some sections were now shown to the Society. The chief points of interest were some leucocytosis, a peculiar arrangement of patches of cell-infiltration breaking down, and leaving rather widely dilated lymph-spaces. There was, of course, some cell-infiltration round the blood-vessels, but perhaps the most striking appearance was the depth and extent of the inflammatory changes in the cutis as compared with the little disturbance at present visible in the epidermis.

It was suggested by one of the members present that the disease might be syphilitic, but to this Dr. Eddowes said he could not agree, either from the clinical history and appearance or the microscopic appearances. The fact that the case was one of Ulerythema centrifugum was to day borne out by the appearance of a diffused and slightly scaly erythema of the cheek, including (as if as centres) the patches above described and showing a defined border. He stated that this was the third case of these peculiar, acute, œdematous patches on the face which he had met with.

Note.—Since the meeting the erythema, which was up to the time of the meeting unilateral, shows signs of becoming bilateral and symmetrical.

Dr. Graham Little showed:

(1) A case of *koilonychia* (spoon-nails) in a young woman, a domestic servant, who had suffered from this condition for about a twelvemonth. She was otherwise in fair health and lived in the country. The nails of the hands were affected in the following manner: The thumb-nail on each side was greatly thickened and curved, leaving a concave depression sufficiently deep to hold about ten drops of water. The index finger on each side was also hollowed out to nearly the same extent. The nails on the other fingers were thickened but not hollowed, the thickening becoming progressively less from the index to the little finger. The nail was brittle and lustreless on the surface, with some striation. The nails on the feet were thickened but not hollowed. This condition was not often met with, and its cause was still very obscure. No parasite had been found after repeated examination both in this case and in those recorded by other observers.

(2) A case of *tuberculides* of the Acne scrofulosorum type, in a little girl, aged 12 years. The lower limbs from the ankle to the upper third of the thigh were the seat of numerous small pitted scars and of more recent acneiform bluish lesions of very characteristic appearance. The legs were particularly affected and were generally blue and almost cyanosed. There was no evidence of any other tubercular disease, and no very reliable history of tubercular disease in the family. Dr. Colcott Fox had emphasised the association of this condition with blue extremities, and especially of the legs. The exhibitor had seen the disease somewhat unusually frequently, especially in the poor neighbourhood of the Children's Hospital at Shadwell, and had been convinced by his experience there that the majority of these cases occurred in weakly children who often showed other signs of tuberculosis. He had seen it, for instance, in connection with a tubercular dactylitis, with Lupus, and with tubercular joint-disease. In his experience it was more common upon the lower extremities, and he explained this incidence on the hypothesis that defective circulation played a part in these cases, and the circulation was more difficult in the lower extremities than elsewhere. In almost all the cases he had seen the extremities were bluish and cold.

Dr. H. G. Adamson thought he had more often seen the upper extremities affected than the lower. The disease was rare in his opinion. He agreed in the description of this case as an "acneiform tuberculide."

Mr. Hartigan did not agree with the description of "acneiform," but thought the disease was a tuberculide.

Dr. G. Norman Meachen showed a girl, aged 16 years, with *cheilitis* and localised hyperidrosis. The upper lip had been observed to be getting thicker and to protrude more than usual for at least two years. When first seen at the Tottenham Hospital there were a few small ulcers and fissures on the buccal mucous membrane adjacent to the red portion of the lip, upon which there was also a small sore. The patient's intelligence was decidedly below the average and she suffered from mitral disease. The integument over the tip of the nose and central portion of the upper lip was in a constant state of sweating; the forehead and other parts of the face remained quite dry. There was a history of fits in childhood, but none of phthisis in the family.

Mr. Spencer Hurlbutt said that the condition resembled strongly that of "scrofulous lip" and he inquired if there were any manifestations of tuberculosis.

CURRENT LITERATURE.

RESEARCHES IN EXPERIMENTAL VENEREOLOGY. (1) INOCULATION OF SYPHILITIC PRODUCTS IN THE EYELIDS OF MONKEYS. THIBIERGE and RAVAUT. (*Ann. de Derm. et de Syph.*, July, 1905, p. 569.)

THE monkeys used in this research were of the species known as Macacus simius and Macacus cynomologus. After many essays, the eyelid was found to be the most effective position for inoculation (and stress is laid on the selection of a site for inoculation). The virus is rubbed into scarifications of the eyelid, exactly as in the process of vaccination. The scarifications heal rapidly and no developments occur until from twenty to thirty-five days, most usually about the twenty-third day, when the eyelid becomes œdematous, at first about the seat of inoculation, later on over the whole eyelid. A nodule usually forms at the point of inoculation, and persists sometimes for as long as fifty-two days after the infection, and would probably persist even longer if left alone; the nodule has usually been removed earlier than this for histological investigation. No definite induration could be made out in the eyelid and no glandular enlargement in connection with it could be discovered. Moreover, no secondary eruption or mucous involvements were ever observed in any of the animals used. These facts emphasise the common experience that the farther removed from humanity the type of monkeys used may be the less susceptible is it to syphilis. The histological data are sufficiently constant to constitute specific characteristics. There is a cellular infiltration especially pronounced near the vessels. In many places the vessels are surrounded by masses of these cells, and even the smallest capillaries are accompanied by similar cells. These cells consist entirely of lymphocytes and plasma-cells. Endarteritis was observed only twice.

The source of the virus of inoculation was varied purposely, and included scrapings from a hand-chancre, a mucous tubercle, a mixed chancre, cerebro-spinal fluid, and in one instance the fluid from a vesicle occurring as part of the eruption of congenital syphilis. In all these cases the inoculation was successful, except with the cerebro-spinal fluid (three failures). The complete certainty, with this single exception, of these experiments renders it possible that the method of experimental inoculation may be resorted to to attest a suspected syphilis (*e. g.* in medico-legal cases), and these animals may take the same place as a means of demonstration of syphilis as the guinea-pig in tuberculosis.

A detailed exposition of the eleven cases recorded follows, and two chromo-lithograph plates showing the clinical and histological features are added.

E. G. L.

RESEARCHES IN EXPERIMENTAL VENEREOLOGY. (2) EXPERIMENTAL SIMPLE CHANCRE OF THE EYELID IN MONKEYS. THIBIERGE and RAVAUT. (*Ann. de Derm. et de Syph.*, October, 1905, p. 753.)

THE identification of the bacillus of Ducrey as the cause of soft sores makes it possible by the finding of this bacillus to establish definitely the character of the

inoculations into animals from soft sores. The absence of this demonstration renders all the earlier observations uncertain, with the exception of those of Nicolle in 1893; this observer demonstrated the bacillus in the sores resulting from inoculation of monkeys from soft sores. Thibierge and Ravaut follow the same method as detailed in the paper on experimental inoculation of syphilis abstracted above. The eyelid was again found to be the most convenient place. Within from twenty-four to thirty-six hours redness and œdema of the eyelid are noted, and in forty-eight hours are at their maximum, and pustules begin to form; these heal about the third day, leaving small ulcers with greyish-yellow bases which bleed freely and attain their largest size about the fourth day. The pus derived from these ulcers is found to teem with Ducrey's bacillus mixed with other organisms. The ulceration diminishes henceforward progressively, to become completely healed in from twelve to twenty-four days from the date of inoculation. No glandular enlargements were noted at any time with inoculation. In other positions than the eyelid marked differences are noted; the evolution is more rapid, and the healing is complete within ten days as a rule. No phagedænic complications were observed. The source of the virus used as vaccine was usually simple chancre of the vulva or anus; in one case a pure culture of Ducrey's bacillus was used as a control experiment.

The inoculated eyelid was examined histologically. Sections from an eyelid excised three days after inoculation showed a vestige of epidermis and mucosa and intense inflammation of the substance of the eyelid: epidermis and mucosa had disappeared altogether in the site of inoculation in sections of tissue taken four days after inoculation. But there was no general necrosis of the whole eyelid. The infiltration of inflammatory cells (polynuclear) was found chiefly around the vessels. No plasma-cells or lymphocytes were seen. Bacilli were found, in chain formation for the most part, always quite superficially, and not in the corium, and their destructive effect therefore would seem to be confined to the epidermis, a fact which would explain the superficial ulceration noted. In human soft sores, on the other hand, the bacillus is frequently found deep in the cutaneous tissues.

A chromolithograph showing the clinical and histological characters of experimental soft sore in monkeys is appended.

E. G. L.

A PRELIMINARY NOTE ON THE ADMINISTRATION OF MERCURY BY THE RECTUM. Audry. (*Ann. de Derm. et de Syph.*, October, 1905, p. 792.)

Audry attempted at first simple injections into the rectum of aqueous solutions of mercuric salts but found these badly tolerated. After some further trials he came to adopt a suppository of grey oil (40 per cent.), each suppository containing the equivalent of ·02 of metallic mercury. These were afterwards increased to ·04 grm. and were well borne. Mercury appeared in the urine on the fifth day after administration, proving its satisfactory absorption.

The method of detecting the presence of mercury in the urine is simple and efficacious. One thousand c.c. of urine was evaporated to 100 gr. at a temperature of 35–40°. To this is added 5 per cent. sulphuric acid, and a zinc-copper couple is suspended in the fluid. The copper gets a white deposit on it if mercury is present.

E. G. L.

HISTOLOGICAL EXAMINATION OF A CASE OF UNILATERAL VERRUCOSE LINEAR NÆVUS (NERVE NÆVUS OR SYSTEMATISED NÆVUS). Menahem Hodara. (*Journ. des Mal. Cut. et Syph.*, August, 1905, p. 561.)

Hodara's patient was a girl, aged 18 years, and it was stated that the affection had first made its appearance at the age of twelve. It consisted of a palm-sized area of small, soft, brownish warts above the right nipple; a linear group of raised dark brown warts, covered in parts by horny masses, above the anterior fold of the right axilla; two lines of flat yellowish-brown elements on the right side of the thorax, extending from above and below the spine of the scapula to the arm; on the anterior surface of the arm only traces of these lines; then above the elbow a warty line two centimetres long, another linear group of dark papillomatous warts at the bend of the elbow, and from here to the wrist a broken line of small flat warts in groups of two or three.

This distribution corresponded with none of the known system of lines, with the exception of the small verrucose line at the bend of the elbow, which appeared to fit in with Voigt's line in this situation.

Hodara reviews the histological observations of other writers; all are agreed that the findings may be very variable. Peterson and Elliot found principally masses of sweat-glands. Hallopeau has described a hyperkeratosis localised round the hair-follicles. Unna found in one case changes characteristic of a hard nævus, and in another case inflammatory changes like those of "eczema seborrhoicum." He thought that one had to deal with either different affections of analogous topography, and that some of these were not nævoid, or with a single malady of inflammatory origin, subsequently transformed into a tumour simulating a dry keratoid nævus. Kaposi, Philippson, Blaschko, Boegel, Breda, Albes-Schonberg, Gerhardt, Galliard, Hagen, Brault, each found infiltrations and telangiectases in the derma and ichthyosiform alterations in the epidermis, and Blaschko and Breda considered the infiltrations to be of inflammatory nature. Jadassohn, again, found in two cases chiefly alterations of the derma—infiltrations of round and fusiform cells around the vessels. In one case there was little change in the epidermis, in the other considerable hyperkeratosis. Some of the lesions examined showed masses of apparently normal sebaceous glands. He divides linear nævi into "organ-nævi"—*i.e.* sebaceous gland nævi, vascular nævi, pilar nævi or sweat-gland nævi, and "tissue-nævi," or those composed of the simple elements of the skin. He admits a slight degree of latent inflammation always present, which becomes manifest upon the least irritation. Meissner found inflammatory appearances, a process of proliferation beginning with dilatation of the vessels and lymphatic spaces, with secondary proliferation of connective-tissue cells, hyperplasia of the prickle-cell layer, and hyperkeratosis. Recently Sachs has described acanthosis and hyperkeratosis with small foci of mononuclear and polynuclear leucocytic infiltration in the papillæ, and he ranges his case among the hard nævi.

In the present case Hodara found in the smaller soft flat warts some dilatation of the blood-vessels and of the lymphatic spaces with cellular proliferation and infiltration round the vessels and proliferation of the connective-tissue cells, changes which were most prominent in the papillary body, the papillæ being slightly elongated. In the epidermis, which showed small elevations and depressions on

the surface, there was a light intra- and intercellular œdema of the prickle-cell layer, mitoses, proliferation and very irregular elongation of the epithelial interpapillary processes, with a hyperkeratosis localised to the depressions, and none at all upon the elevations. There was an accumulation of pigment in the basal layer of the epidermis, more accentuated in parts. In the larger, raised, horny-covered papillomatous growths the changes were similar but accentuated. The perivascular cellular infiltration and proliferation was most pronounced around the vessels in the upper part of the derma, where there were large perivascular foci of small cells, with deeply stained rounded nucleus, and without any polynuclear leucocytes. There was a pronounced proliferation of the connective-tissue cells, especially in the subpapillary and papillary regions, and mitoses were observed in these cells. There was a more or less marked and irregular hypertrophy and elongation of the papillæ, giving rise on the surface of the skin to multiple irregular elevations. The epidermis showed considerable hyperkeratosis in the depressions between these raised portions, with œdema and marked proliferation of the prickle cells, which showed numerous mitoses. There was a large accumulation of yellow pigment in the middle and basal layers of the prickle cells and here and there masses of pigment in the papillæ. There were no alterations of sweat-glands nor of sebaceous glands.

The changes here observed are to be contrasted with those found in pigmented moles; the epithelial detachments towards the derma and the groups and rows of cells of epithelial origin so characteristic of soft pigmented nævi are not seen in linear nævi. H. G. A.

A CONTRIBUTION TO OUR KNOWLEDGE OF MYCOSIS FUNGOIDES. Brandweiner. (*Monats. f. prakt Derm.*, November 1st, 1905, p. 415.)

A single case is reported, but it is of interest because of the autopsy. The patient was a man of 50, whose skin trouble dated back thirty years. When admitted to the hospital on October 3rd he showed very few nerve symptoms:—convulsive tic of the retrahens auriculæ, but no abnormality of sensation and no alteration of reflexes. He stayed in the hospital until January 20th, 1905, when he died. On January 16th his nervous symptoms had greatly increased, so that he was unconscious, with right-sided hemiplegia, the head and eyes deflected to the left, the deep reflexes present and more active on the right side, but no Babinsky's sign. Needle-pricks were felt on both sides of the body.

Post-mortem examination showed nodular masses in both cerebral hemispheres, partly in the grey matter, party in the cortex, the largest being in the left hemisphere. Some of the tumours were as large as a hazel-nut, some as large as a small apple. Brandweiner suggests that the large size of the cerebral growths was due to the fact that in such a situation they could undergo very little resorption as compared with similar lesions situated in the skin. Although in this case the cerebral metastases might have existed some considerable time, there was no sign of absorbed or disappearing lesions nor any residue of such. The slow growth of the cutaneous tumours and the slow spreading of the dermatosis led to the assumption that the growths in the brain had also advanced with little rapidity, but the final fatal termination was due to them. These cerebral lesions were of hæmatogenous origin, and this is the only case published in which such

an origin could be proved. The histological examination of the brain tumours proved that the cells of mycosis tumours are not of connective-tissue origin. According to our present knowledge, there is no reason to look upon the lesions of mycosis fungoides as cutaneous metastases of leucæmia; indeed, there is no definite reason to assume a connection between mycosis and leucæmia.

J. L. B.

AN UNUSUAL CASE OF SYPHILIS HÆMORRHAGICA IN AN ADULT. Weitz. (*Monats. f. prakt. Derm.*, December 1st, 1905, p. 544.)

A sailor, aged 23 years, four days after exposing himself to infection, developed a swelling under the foreskin and additional ones during the next few days. About a month afterwards the foreskin was slit up and an indurated ulcer was exposed. A few days afterwards he complained of sore throat, and the anterior surface of the uvula and the right tonsil were found to be extremely ulcerated. Next day the abdomen and thighs showed numerous smallish, isolated or confluent, dark, reddish-blue patches which did not disappear with pressure. In number they amounted to forty. Specific treatment was started, and the day after the first injection the cutaneous lesions appeared still more prominent, but then they remained unchanged for ten days, after which they began to fade, becoming yellowish. After the second injection typical macules appeared, but not on the site of the previous purpuric spots. No further outbreak of these purpuric lesions made its appearance, and all the syphilitic macules and ulcers disappeared under treatment without any rise of temperature showing itself or any albumen appearing in the urine.

The literature of hæmorrhagic syphilis in adults contains few cases of genuine hæmorrhagic patches, hæmorrhagic papules being much more common. It has even been denied that a primary hæmorrhagic nodule ever occurs. Microscopical examination of one of the purpuric patches showed no hæmorrhage into the tissues, but a marked dilatation of small vessels, which were packed full of blood-corpuscles. In this case no escape of red corpuscles through the vessel walls appears to have taken place, and this is distinctly interesting when the clinical appearances are recalled to mind. In any case deficient coagulability of the blood does not appear to be a factor in hæmorrhages, since the syphilitic eruptions in hæmophilics do not become hæmorrhagic.

J. L. B.

ON ACID NUCLEI IN NORMAL SKIN. Hermann Hensel. (*Monats. f. prakt. Derm.*, December 1st, 1905, p. 531.)

Unna first noticed these nuclei when decolorising sections with tannin after they had been stained with polychrome methylene blue. The majority of the nuclei were, as a rule, stained blue, but a few were stained a deep violet. The reactions of the stain were, however, not actually known, so Unna investigated the staining powers of the acid nuclei with two stains whose composition was known and whose chemical natures were opposed to one another. The sections were placed for one minute in 1 per cent. Wasserblau, washed in water, then put in 1 per cent. safranin for five minutes, washed, and left for half a minute in acid alcohol (1 per cent. HCl). They were then washed in absolute alcohol and mounted.

Ordinary nuclei showed up blue by this method; the nuclei that had before stained violet now were red and retained the red colour even after longer treatment with acid alcohol; they were the acid nuclei. Unna found these nuclei in chronic inflammations such as leprosy, syphilis, tuberculosis of the skin, and he found that their acid reaction did not in any way depend on the age of the nuclei. He looked upon them as only occurring abnormally in normal skin, and inasmuch as they never showed mitoses he considered that these nuclei were incapable of reproducing themselves, and the tissue in which they occurred was the less capable of reproduction the more acid nuclei it contained. Hensel has investigated portions of skin taken from fifty-five bodies, and of the twelve methods of staining used for demonstrating acid nuclei he preferred the following: After the sections were freed from celloidin they were left for ten minutes in non-acidified 1 per cent. orcein solution, washed in absolute alcohol and then in water, afterwards put for two minutes in gentian and alum solution, washed in water and then for half an hour in 25 per cent. tannin. They were then washed again and passed through alcohol and oil to Canada balsam. This method stains acid nuclei dark blue, sometimes with a slight tinge of violet as compared with the other nuclei, which are pale. Hensel found acid nuclei a normal constituent of healthy skin at all ages, but their number varied considerably, the cause of this variation being unknown. They were usually larger than the non-acid nuclei, and in normal skin were found most abundantly in sweat-glands and hair-follicles.

J. L. B.

EXUDATIONS AND KERATOSES. Professor J. F. Selenew. (*Derm. Zeitschr.*, September, 1905, p. 569.)

The author brings forward a number of cases to show that the dry catarrhs of the skin—*e. g.* psoriasis, Lichen planus, ichthyosis, may be accompanied by exudation, with the formation of weeping surfaces, vesicles, and bullæ. He cannot accept the explanation put forward by the Vienna School of a transition of the type into eczema, and holds, on the contrary, that the exudation is intimately associated with the etiology and histology of the process. At the same time, he draws attention to the fact that the opposite may occur, and a case is recorded to show that a pure exudative type, such as Pemphigus foliaceus, may be transformed into Ichthyosis hystrix.

The first case is one of typical Ichthyosis hystrix in a man, aged 22 years, in which bullæ formed on the legs without any obvious traumatism. Histological details are given.

In a case of Pemphigus foliaceus ending fatally the post-mortem examination revealed caseous degeneration of the bronchial glands and old pleuritic adhesions. In this case an examination of the blood made during life by Dr. Grinjew revealed, amongst other things, a diminution of the eosinophile leucocytes. Some analyses made by Dr. Hefter in this case showed that there was certainly no deficiency in the assimilation of nitrogen and probably an increase. Since the patient's condition grew steadily worse, the author considers that the large nitrogenous intake must have been balanced by the loss in the serum of the bullæ and in the scales of epidermis thrown off. On the legs this patient presented a condition which could not be distinguished from Ichthyosis hystrix. Full histological details are given.

The third case was one of Pemphigus vegetans in a Jew, aged 46 years. This also ended fatally. Here, too, the post-mortem examination revealed tubercular disease, the lung and small intestine being affected.

Two cases called Erythema exsudativum ichthyosiforme are recorded briefly to illustrate the close connection between the two states. Finally, cases of Psoriasis madidans and Dermatitis exfoliativa are referred to.

So far as it is possible to give them, the author's conclusions are that the clinical appearances of the numerous skin-affections here brought under review are due very largely to the force and degree of rapidity with which and the extent of surface over which the contents of the blood-vessels reach the surface.

W. B. W.

FIBROMA MOLLUSCUM (VIRCHOW). Dr. Hans Vörner. (*Derm. Zeitschr.*, October, 1905, p. 660.)

This case is interesting by reason of a remarkable pigment anomaly that it presented. The patient, a woman, aged 30 years, had her whole body covered with the typical small fibromata. It is noted that the tumours seemed softer than the surrounding skin, so that the normal cutis appeared to form a ring round them. There were some large pendulous tumours, one of them reaching from the left shoulder to the middle of the upper arm. As is the case in so many instances of Fibroma molluscum, there were marked pigment disturbances. The whole body was covered with pigment flecks. Below the waist the skin, over an area that would be covered by the old-fashioned bathing drawers, was evenly and deeply pigmented. Between the shoulder-blades there was an area the size of the palm of the hand from which the pigment had almost entirely disappeared. A few pigmented spots remained, but they were inconspicuous. The border of the area was sharply defined, and in two places the line passed across the middle of a pigment fleck. Apart from the depigmentation the skin in this area appeared normal. A small tumour was excised, and full histological details are recorded. In addition a small pigment fleck was excised, and it was discovered on examination that this contained a minute Fibroma molluscum tumour not more than 0·1 mm. in size. This consisted of compactly arranged spindle-cells with large nuclei. Already these had grouped themselves round three centres to form three nodules, an arrangement very conspicuous in the larger tumour. The author regards it as noteworthy that no nerve-fibrils were present in this minute tumour, though they were included in the larger ones. He considers this fact to negative v. Recklinghausen's view as to the formation of these tumours.

W. B. W.

THE COINCIDENCE OF LICHEN RUBER AND DIABETES WITH THE HISTOLOGY OF LICHEN SCLEROSUS. Dr. E. Hoffmann. (*Derm. Zeitschr.*, October, 1905, p. 654.)

The author has found only two undoubted cases of lichen in association with diabetes—one recorded by Brocq, the other by Saalfeld. Morrow mentioned the association of diabetes with a lichenoid eruption, and Danlos brought forward a case, which was, however, pronounced by Darier to be Pityriasis rubra pilaris. Two cases of this rare association have come under the author's care, and he now records them.

Case 1.—A male, aged 39 years, whose father had died of phthisis. The patient was found in 1901 to be suffering from diabetes (4·8 per cent. sugar). The sugar disappeared in a few months, but reappeared from time to time when the diet restrictions were relaxed. The skin-eruption appeared in August, 1903. In September, 1904, when he came under notice, it was noted that he was a big, well-built, and well-nourished man. The eruption was present as bands on the left thigh in front and on the left side of the neck. The bands appeared white, with a blue shimmer, their surface mosaic-like, owing to fine white lines, and covered by a thickened, but not scaling, horny layer. The centre showed atrophy and also brown pigmentation. Near the bands were detached nodules and patches with white sunken centres and thin pale-rose borders. There was little itching. The mucous membranes were free. Diagnosis: Lichen ruber atrophicans vel sclerosus.

Histology.—The papillæ in the affected area had disappeared. In the cutis there could be distinguished, as Darier had pointed out, three zones—an upper layer, made up of dense sclerotic connective tissue, with few cells, some dilated capillaries, filled with erythrocytes and occasional bundles of elastic tissue running a horizontal course; a middle layer, showing a dense infiltration of mononuclear cells, most marked round the vessels; a lower layer, in which the mononuclear cells only occurred in special places—*e. g.* round the glands and larger vessels. In this layer the elastic tissue was normal. Between the cutis and epidermis existed small fissures.

The second case was one of ordinary Lichen planus in a man aged 58 years, who had suffered from diabetes for about two years, with from 2 to 4 per cent. sugar in his urine. The mucous membranes were affected, and intense itching was complained of; otherwise there were no features of special interest.

W. B. W.

STRIÆ FOLLOWING SCARLET FEVER. Leo Silberstein. (*Münch. med. Wochenschr.*, November 7th, 1905, p. 2185.)

A girl, aged 13 years, developed scarlet fever complicated by a nephritis. In the sixth week of the illness striæ appeared on the nates, thighs, front of the knees, and on the breasts. During her illness the patient ate well and gained steadily in weight and circumference. It is to this increase of skin-tension that the author ascribes the striæ. Six months afterwards the patient was still suffering from albuminuria. W. B. W.

A PECULIAR CASE OF PROFUSE CIRCUMSCRIBED SEBACEOUS SECRETION. Thomas von Marschalko (*Derm. Zeitschr.*, November, 1905, p. 713.)

The author remarks that, whereas there is abundant evidence of the influence of the central nervous system on sweat-secretion, there is practically none of its influence on the secretion of sebum. Seeing that sebum is not a true secretion, this is not surprising. Arloing found in his experiments on asses that section of the sympathetic in the neck caused a profuse skin-secretion in the ear of the side experimented on; but he was quite unable to determine if this secretion owed its existence to interference with the nerve-supply to the sebaceous glands or merely to a disturbance of the circulation in the part. A

special interest is claimed for this case, in which a connection appears to be established between a nerve-lesion and a circumscribed hypersecretion.

A woman, aged 33 years, received, eleven months previously, a severe blow on the left supra-orbital margin. Considerable swelling ensued, followed by a pustular inflammation and anæsthesia of the part. Some weeks later pain developed in the part, with a flow of tears on that side. Some bone splinters were removed in the hospital at Buda-Pest without giving her any relief. There followed on the affected side a profuse fat-secretion, for the relief of which she came to the dermatological clinic. When first seen the left supra-orbital, frontal, and temporal regions were covered with a dirty brownish-yellow adherent crust 0·5 cm. thick, and with its surface divided by folds into polygonal areas. The surrounding skin appeared quite normal. The patch was decidedly painful. After removal of a portion of the crust the skin beneath was seen to be hyperæmic, glistening with fat, and a white semifluid fat could be seen issuing from the dilated follicles. The left eye was inflamed, there being photophobia, excessive lacrimation, and traumatic cataract. After the crust had been completely removed, a painful scar was discovered on the supra-orbital margin corresponding to the point of exit of the nerve. The scar was excised with a thin plate of bone lying beneath, in which was found imbedded the nerve. The patient departed for home twelve days after the operation. So far as could be ascertained her condition was not greatly improved.

W. B. W.

TWO CASES OF SPONTANEOUS KELOID. H. Kirsch. (*Archiv f. Derm. u. Syph.*, February, 1906, p. 255.)

Two typical cases of the so-called "spontaneous keloid" are here described which occurred in two male adults. In both cases the keloids were multiple, and the most prominent lesions were situated in one case in the sternal region and in the other on the chest below the areolæ of the nipples. The lesion was excised from the sternal region and did not recur. It was examined microscopically and found to be a fibromatous growth taking its origin from small cells around the blood-capillaries of the cutis. The epidermis was stretched over the tumour-mass, and the elastic tissue was destroyed by pressure. In the second case the largest lesion was caused to resolve by the X-rays after producing an X-ray dermatitis. The writer considers that the lesions he has described should be regarded as benign new-growths of unknown etiology, but different from scar-keloid.

J. M. H. M.

A CASE OF OIDIOMYCOSIS OF THE SKIN AND SUBCUTANEOUS TISSUE. S. Sakurane. (*Archiv f. Derm. u. Syph.*, February, 1906, p. 211.)

In this contribution Sakurane describes a case of probable oidiomycosis which occurred in his practice at Osaka, and which he believed to be the first case of the kind which had been recognised in Japan. The patient was a young peasant girl, aged 9 years, who first came under his observation in 1903, suffering from a small tumour about the size of a pea on the left side of the nose near the left inner canthus. In January, 1905, the lesion had increased considerably and had reached the size of a small nut. It had also altered in appearance and become transformed into a granulomatous lesion covered with a scab under which was a

purulent discharge. From the crust and the discharge a fungus resembling a yeast was isolated. The lesion was associated with no subjective symptoms. Besides this tumour there were several other smaller growths situated over the left malar bone and around the original lesion. The lymphatic glands in the left submaxillary regions were enlarged. The largest lesion was excised and was found to extend down to the nasal bone, from whence the peritoneum had become raised up. Microscopical examination of the tissue showed that the epidermis was œdematous and had proliferated. The stratum corneum was imperfectly developed and nuclei were present in the cells, while the transitional layers were deficient in keratohyalin. The interepithelial lymphatic spaces were dilated and leucocytes were present between the prickle-cells. Here and there small superficial abscesses were present in the epidermis. In the corium there was an infiltration consisting of leucocytes, epithelioid cells, giant cells, and plasma-cells. This was well marked in the papillary and subpapillary layers, where it tended to be diffuse, while deeper down it formed foci around the blood-vessels. Near the subcutaneous tissue the cellular infiltration was unusually dense. The fungus was found to be present on the surface, in the superficial abscesses, and in the midst of the infiltration in the various parts of the corium. The fungus was also detected in an enlarged lymph-gland. The fungus consisted of round or oval cells, and various sized pieces of mycelium, with a doubly contoured membrane enclosing a granular protoplasm. The fungus grew readily on potato and on maltose agar, where it formed yellowish-brown colonies under the skin. An injection of the culture was made under the skin of a mouse and it died in three days, the fungus being recovered from the liver and mesenteric glands. Injected into a guinea-pig, it caused death in twenty-eight days. Though in many particulars the case suggested the blastomycetic dermatitis of the American writers, the author leaves it an open question whether it should be included in that category.

J. M. H. M.

MYOMATOSIS CUTIS DISSEMINATA. G. Nobl. (*Archiv f. Derm. u. Syph.*, March, 1906, p. 31.)

In this communication the writer describes an extensive case of myomatosis cutis. The patient was a young woman aged 25 years. The myomata were present chiefly on the limbs and formed brownish-violet lesions which were hard like cartilage, and varied in size from that of a pea to a bean. Here and there a number of lesions had coalesced to form tumours about the size of a nut. Their presence was associated with itching. A microscopical examination was made of one of these lesions which showed that the tumour consisted of a mass of smooth muscular fibres situated in the reticular layer of the corium. This was surrounded by a layer of white fibrous tissue. The muscular tumour was connected with, and probably originated from, the arrector pili in the neighbourhood.

J. M. H. M.

ON A MIXED TUMOUR OF THE SKIN. Hans Vörner. (*Archiv f. Derm. u. Syph.*, April, 1906, p. 187.)

By a "mixed tumour" of the skin the writer means a neoplasm which is made up of epiblastic and mesoblastic elements and contains a new growth of epithelium

and connective tissue. A case apparently of this nature occurred at the Polyclinic at Leipzig. The patient was an adult male who came up for treatment on account of a pea-sized tumour on the side of his nose which had been present for sixteen years. A year before he came under observation at the Polyclinic an attempt had been made to destroy the lesion by the thermo-cautery, but it had been unsuccessful and the lesion had recurred. In consequence it was excised and a microscopic examination made. The tumour mass was situated in the corium and was surrounded by a capsule of connective tissue. Within this capsule there was the mixed growth consisting of connective-tissue cells in all stages, some being round and forming dense foci, others spindle-shaped, and others becoming fibrous. In addition to this there were epithelial masses consisting of irregular processes tending to have an alveolar arrangement and everywhere surrounded by a perfect basal layer of columnar cells. Mixed up with the epithelial growth were several incomplete hair-follicles. The writer considers that the epithelial portion of the tumour probably did take its origin from the epithelial cells of pilo-sebaceous follicles which had been cut off in embryonic life and persisted as "cell-rests" in the Cohnheim sense of the term.

[The employment of the term "mixed tumour" is apt to be misleading. The appearances portrayed in the illustrations which accompany the article seem to show an epithelial tumour with secondary change in the corium. Almost all tumours are mixed in this sense, and it is only a matter of degree. A scirrhous cancer of the breast, for example, is a mixed tumour in the sense that fibrous proliferation has been added to the epithelial growth; but this is secondary, and it would only lead to confusion to classify such a neoplasm as a "mixed tumour."]

J. M. H. M.

STUDIES UPON EXPERIMENTAL VARIOLA AND VACCINIA IN QUADRUMANA. W. R. Brinkerhoff and E. E. Tyzzer. (*The Philippine Journ. of Science*, April, 1906, p. 239.)

This contribution to the knowledge of experimental variola and vaccinia in monkeys is of special interest just now, when there is a tendency, not only among the misinformed laity, but also among certain members of the medical profession, to discredit the value of vaccination. The paper gives the result of an elaborate series of experiments and occupies over a hundred pages of close type. It begins with an Introduction by W. T. Councilman; then follows a critical review of the literature on experimental vaccinia and variola in monkeys; and finally the experiments and conclusions of the writers are recorded. Vaccinia was inoculated in the Philippine monkey (*Macacus cynomologus*) with the following results: (1) The inoculation of the skin with the vaccine virus was followed by the development of a lesion at the site of inoculation which was similar in all respects to those which followed similar inoculations of other animals; (2) the development of the lesion was associated with a rise in the body temperature which was most marked during its active evolution; (3) the organism known as the *Cytoryctes variolæ* was found in the epithelial cells of the vaccine lesion and also in the endothelial cells and capillaries beneath the epithelium of the lesion. The vaccination of the cornea of the monkey produced a lesion which was specific and which was comparable with that following the same inoculation in

the rabbit. The lesion was characterised chiefly by the loss of epithelium at the site of inoculation, the development of photophobia and conjunctivitis, and the presence of *Cytoryctes vaccinæ* in the cells of the lesion. Vaccination of the monkey upon the nasal, oral, and buccal mucous membrane gave rise to a true vaccine lesion similar to that which followed vaccination of the skin.

A monkey of the same species was next inoculated with variola virus, which produced a disease in which all the essential characteristics were identical with "variola inoculata" in man, but differed from that in man in that the fever had a shorter duration, and the exanthem appeared at an earlier date. The *Cytoryctes variolæ* were found in the endothelial cells in the corium beneath the primary lesion of the variola inoculata. The orang-utan was also found to be susceptible to variola, and gave similar results. To produce the variola in the monkeys inoculation was necessary or inhalation of the variola virus, but exposure to smallpox fomites and to a smallpox patient was insufficient to produce true variola. A number of experiments were also carried out to determine the immunity reactions of the monkey after inoculation with vaccine or with variola virus. These proved that (1) a vaccine lesion on the skin of the monkey conferred upon the animal an immunity to subsequent inoculation of the skin with vaccine or with variola virus; (2) that a variolous lesion on the monkey's skin protected against subsequent inoculation of the skin with variola virus, but did not in all cases protect against later inoculation with vaccine virus; and (3) that the failure of variola inoculation in the monkey to protect against subsequent skin-inoculations with vaccine virus depended on the fact that this species of animal produced a smaller amount of the germicidal substance necessary to inhibit a second inoculation after variolation than it did after vaccination.

It was found that the immunity which accompanied the development of a vaccine lesion on the skin of a monkey became manifest between the sixth and eleventh days, and that after a variola lesion of the skin it appeared between the fifth and eighth days. The *Cytoryctes variolæ* are the "specific inclusions found in the cells in vaccinia and variola" which have been described at length by Guarnieri and others, and were believed to be intra-cellular organisms. In addition to these bodies on the protoplasm, a series was found in the nuclei of the epithelial cells of the specific lesions of variola; these were described by Councilman and others, and were considered to be phases in the organism peculiar to smallpox. These bodies, both the cytoplasmic and the intra-nuclear varieties, were carefully sought for in the inoculation lesions in the monkeys, and appeared both in the variola inoculation and vaccinia soon after the inoculation and persisted for about eight days. The intra-nuclear forms were found in small numbers in the primary skin-lesion of variola inoculata in the Philippine monkeys, but in far greater numbers in the corresponding lesion of the orang-utan. These nuclear forms were only occasionally found in the lesions of the general eruption following the inoculation of the skin of the monkey with variola virus. The cytoplasmic forms were constantly associated with variola and vaccinia, and were found included in a variety of cells, the squamous epithelium of the skin, the cornea, the mucous membrane of the nose and mouth, the epithelial lining of the alveoli of the lung and connective-tissue cells. The paper is illustrated by a series of micro-photographs.

[The nature of the cellular inclusions to which the name *Cytoryctes variolæ* has been given is still open to discussion, but the fact of their almost constant

occurrence in the lesions of experimental variola and vaccinia in the quadrumana would suggest that they are at least peculiar characteristics of the histological picture of variola. That they are protozoic organisms and the causal agent of the diseases is not proved, and it is more than probable that they are simply peculiar formations resulting from a degeneration either of the spongioplasm of the cell or of the intra-nuclear network, according as they are in the cytoplasm or the nucleus.] J. M. H. M.

ON THE INFLUENCE OF LIGHT IN THE PRODUCTION OF CANCER OF THE SKIN. By James Nevins Hyde, M.D. (*Amer. Journ. of the Med. Sci.*, January, 1906.)

This is a special illustrated article contributed to the *American Journal*, by Dr. Hyde, giving a *résumé* of our present knowledge of this subject, with special reference to the distribution of cancerous disease in the States of the Union.

Dr. Hyde first of all gives a short statement of recent progress in the investigation of the etiology of malignant growth, and then discusses the effects of light and of other radiations on the human skin. An opportunity is also given to bring under review the phenomena of Xeroderma pigmentosum and the carcinomatous degeneration of the senile skin. Dr. Hyde specially describes a group of three cases of Xeroderma pigmentosum, consisting of a brother and two sisters recently under his observation. The influence of the naturally pigmented skin as a protection against the development of cancer in the case of the dark races is discussed.

The following are the conclusions formulated by Dr. Hyde:

(1) The skin of the human body, in a certain proportion of individuals, and in those only, is hypersensitive to the action of the actinic rays of the spectrum.

(2) This hypersensitiveness may be exhibited in the production of either hyperæmia, pigmentation, telangiectasis, atrophy, hyperkeratosis, or cancerosis of the skin; or by all, at times, in a determined order of succession.

(3) In the form of childhood cancerosis known as Xeroderma pigmentosum, the pigmentation, telangiectasis, atrophy, hyperkeratosis, and cancerosis of the skin resulting from exposure to rays of light are exhibited early in life; instances of this disorder are exceedingly rare.

(4) Pigmentation, telangiectasis, atrophy, hyperkeratosis, and cancerosis of the skin occur in adults much more frequently than in childhood, reaction to the play of actinic rays of light upon the surface being chiefly determined after the middle periods of life have been reached.

(5) Physiological pigmentation of the skin in the coloured races seems to furnish relative immunity against cancerosis of that organ.

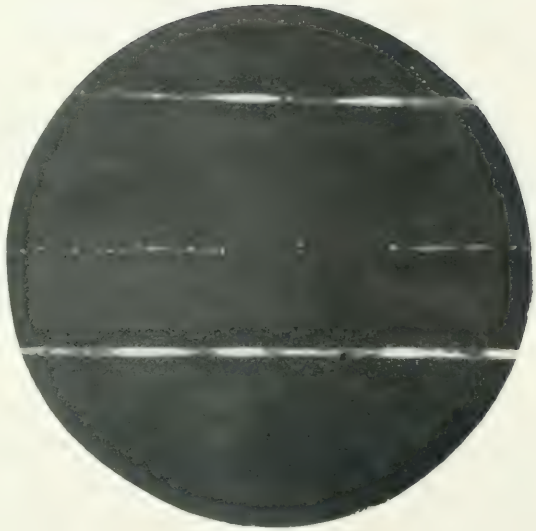
(6) The coloured races apparently suffer less than the whites from cancer of other organs than the skin. This relative immunity may be due to the protection from actinic rays of light furnished by the pigment of the integument.

An extensive bibliography is added by Dr. Hyde.

J. G.



II. Granulosis Rubra Nasi



III. Ringed Havis

Dr. Colcott Fox's Cases.



I. Dr. Colcott Fox's Case of Eczema Seborrhoicum with Spines

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ON CUTANEOUS AFFECTIONS IN VARIOUS DISEASES, WITH ESPECIAL REFERENCE TO CERTAIN ANGIO-NEUROSES.*

By S. ERNEST DORE, M.A., M.D.Cantab.

It is well known that many of the so-called general diseases are apt to be accompanied by rashes on the skin. In some, as in diabetes and renal affections, there are grounds for presuming the existence of a causal relation between the organic and the cutaneous disturbance; in others the local affection appears to represent the reaction of the skin to a toxæmia of gastro-intestinal or other origin; in others, again, the association may be accidental. It is not always easy to discriminate between dependent and merely coincident eruptions, but in the following brief account the latter have as far as possible been eliminated. In considering the association of cutaneous with general disorders it will be convenient to deal with the latter as they affect the various organs of the body, beginning with the kidneys, in which the association is usually regarded as being the most striking.

The various infective diseases will be dealt with separately.

Diseases of the Kidneys.

The occurrence of cutaneous eruptions as a result of renal disease is less frequent than might be expected in view of the important

* Thesis written for M.D. Degree, Cambridge.

physiological relations which the kidneys bear to the skin. The respective functions of these organs are to a certain extent compensatory, and use is made of the fact in the therapeutic administration of diaphoretics in kidney disease.

In pathological states of the kidneys, when there is evidence that the skin is acting on behalf of these organs, rashes are far from common. When, however, they do occur the process of their production is by no means clear. It is possible that the increased or altered function entailed by this vicarious action may cause eruptions by interference with the vasomotor system of the skin. It is probable that the cutaneous blood-vessels share in the general arteriosclerosis so commonly seen in chronic nephritis.

There certainly appears to be no definite relation between albuminuria and skin-eruptions; and this statement holds when the albuminuria is a symptom of organic kidney disease, or when it is of the so-called "functional" character. It must be remembered that albuminuria may be the result of a cutaneous affection rather than its cause.

The skin-disease which more than any other has been said to be often associated with nephritis is eczema, but this is probably accounted for by the great frequency of this skin-affection and by the fact that albuminuria is too often taken to be evidence of kidney disease. But apart from these facts the association of eczema and albuminuria is not very common in actual practice.

The same remarks apply to the association said to exist between various pyogenic infections and nephritis; no doubt there is diminished resistance of the tissues, disposing them to such infections, but the association is by no means common. It seems certain that neither pyogenic infections nor eczematous eruptions occur in association with nephritis or albuminuria with the same frequency that they do with diabetes or glycosuria.

The cutaneous phenomena which occur as the result of renal disease were studied by Thibièrge in 1885, and have been more recently investigated by Lancaster, Pye-Smith, Thursfield, Pringle, and others in this country.

They may be classified as follows:

Pruritus, either local or general, is found in the early or late stages of Bright's disease. It may be the first symptom, and

constitute an important element in the diagnosis, or may immediately precede uræmic convulsions. It is often associated with chronic uræmic conditions, and according to Dieulafoy and Mathieu, is present in one third of all cases of chronic nephritis. Itching may also accompany "uræmic" erythema.

Urticaria and Eczema.—The former is uncommon, but has been noticed by Samuel West and Thursfield in chronic interstitial and by Waldo in acute nephritis.

It is probable that some of the eruptions described as urticarial and eczematous, may have been minor degrees of "uræmic" erythema.

Samuel West refers to a discrete papular eruption, sometimes lichenous and somewhat resembling chronic urticaria. Pye-Smith gives as the most common form of dermatitis observed by him "a chronic disease, with large, pale, discrete papules, occupying the trunk rather than the limbs, and the limbs rather than the face, and marked with considerable pruritus." Merck describes a chronic, localised, itchy, papular eruption, occurring in patients of advanced life, which he terms "Eczema albuminuricum." As I have already remarked, eczema is usually included as one of the eruptions due to renal disease, but there appears to be a general agreement among those who have investigated the subject that even albuminuria is not unusually frequent in cases of eczema. In Besnier's clinique, for instance, in which regular examinations of the urine were made, albuminuria rarely occurred in the course of eczema, in spite of the frequency and generalisation of the latter disease, and in ten years Jordan only met with two cases. It may be mentioned that Erythema uræmicum sometimes assumes the appearance of a general eczema (Lancaster).

Erythema.—(*a*) According to Pye-Smith there is a bright red, diffused rash, which appears chiefly on the trunk, less often on the neck, arms, and thighs, and very seldom on the face, hands, and feet, which is most often seen in cases of chronic tubal nephritis. It does not itch, and only lasts a few days. Other authors do not mention this rash. As stated above, it is probable that minor degrees of erythema may have been described under the name of eczema or urticaria. (*b*) Erythema papulatum uræmicum of Huet (1870) subsequently described by Bruzelius in 1881, by Le Cronier, Lancaster (eight cases in 1892) and Lindley Scott (five cases in 1899). It

appears as the immediate precursor of uræmic symptoms and is generally regarded as of grave prognostic import, death usually supervening within five or six weeks of the appearance of the rash. Pye-Smith and Crocker, however, are of the opinion that it does not necessarily imply a fatal issue. It occurs in the late and uræmic stages, chiefly of interstitial but also in parenchymatous nephritis (Huet). The eruption is rare—Thursfield only found forty-six recorded cases in the medical literature of the last twenty-five years. It is first seen on the extensor surfaces of the hands and feet—usually as discrete macules of a bright red colour, which become papular within a few hours to a day or two (Le Cronier, Lancaster). These papules or nodules are situated on an erythematous base and are surrounded by a red areola. (Crocker describes the rash as occurring in the form of thumb-nail size discs; he also says that the erythemata of the uræmic stage may be papular, scarlatiniform or morbilliform.) At first of a bright crimson colour, it tends to become darker as it progresses. At the end of a few days the rash becomes confluent, the papules becoming merged in a general dusky erythema which affects the whole body and face. Desquamation ensues in about a fortnight, either in the form of small branny flakes (Huet), or long thin strips, principally on the hands and feet, leaving cracks from which blood or serum oozes (Bruzelius). Occasionally vesicles or bullæ form (Pringle saw a case which closely simulated pemphigus), or the eruption may become pustular, hæmorrhagic, or eczematous. Itching is, as a rule, slight. Several anomalous cases of erythema accompanying nephritis have been recorded. Such are Galloway and MacLeod's case of Erythema multiforme, resembling Lupus erythematosus, and Whitfield's case of vesicating erythema in a patient with cardiac and renal disease.

Bullous eruptions.—The evidence for regarding primary bullous eruptions as a result of renal disease is inconclusive. Some of them appear to have been instances of a late stage of uræmic erythema, in which, as already mentioned, bullæ simulating pemphigus may occur. Only four cases are recorded—those of Murchison (1867), Persy (1887), Barrs (1896), and Dyce Duckworth.

Sir Dyce Duckworth's case of "acute pemphigus" began as pimples on the wrists, which subsequently turned to blisters. In Barrs' description of his case he says that "in parts the vesicular

stage had not been reached, and the inflamed skin showed only papular elevations, in some instances with a distinct scaliness of the surface."

In Murchison's and Persy's cases there was no mention of other lesions than bullæ, which in the latter case were confined to the lower limbs. They were surrounded by a zone of erythema and were coincident on two occasions with uræmic convulsions and coma. In Murchison's case the eruption had been limited for nearly two years to one leg before it became general. There is little foundation for the suggestion made by Leredde, Perrin, and others, that Dermatitis herpetiformis is an auto-intoxication due to renal inadequacy (see *British Journal of Dermatology*, December, 1895, vol. vii, p. 386).

Purpura.—This is a well-recognised phenomenon of Bright's disease. It usually occurs on the lower limbs in the form of numerous petechiæ, or rarely as large ecchymoses. It accompanies other hæmorrhages, principally epistaxis, and is often a manifestation of uræmia. It is most often met with in interstitial, but it is also found in puerperal, scarlatinal, enteric, surgical, and other varieties of nephritis. It may occur in the absence of œdema, and is often, but not always, of bad prognosis. Colcott Fox described a case in which a severe universal hæmorrhagic erythema followed a slight petechial eruption in a woman who had interstitial nephritis.

Pityriasis rubra.—There is not much evidence for regarding this eruption as a consequence of renal disease; in the great majority of cases the albuminuria is the result rather than the cause. Pye-Smith, however, has seen cases in which the eruption appeared when other features of Bright's disease were already prominent. Sir Dyce Duckworth reported a case of chronic interstitial nephritis in which Dermatitis exfoliativa supervened and was followed by uræmia and death. Other cases have been observed by West, Saundby, and Thursfield.

As uræmic erythema is followed by diffuse exfoliation, which is in some cases indistinguishable from Pityriasis rubra (as in one of Lindley Scott's cases), it is probable that this condition may sometimes represent a late stage of that eruption. I have already suggested that a bullous eruption may really be a late stage of a uræmic erythema.

Pyogenic infections, including boils, erysipelas, and gangrene have already been referred to.

Erythema leve is due to œdema of the extremities and is therefore only indirectly dependent upon the kidney disease.

The cutaneous affections which have been stated to accompany nephritis may be summarised as follows:

(1) Pruritus.

(2) Urticaria.

(3) Erythema. { (*a*) Mild and transient. (*b*) Severe (Erythema papulatum uræmicum). This eruption may become vesicular, bullous, hæmorrhagic, or exfoliative.

(4) Vesicular, bullous, and chronic scaly eruptions,* with Pityriasis rubra—distinct from (3).

(5) Purpura.

(6) Erythema leve.

(7) Pyogenic infections.

Renal Affections resulting from Cutaneous Disease.

The renal disturbances which result from cutaneous affections may be considered separately, although in many cases it is difficult to decide whether the affection of the skin or the kidney is primary. Suppression of the skin-secretions is not necessarily attended by disturbance of the renal functions. The skin may be universally diseased without seriously interfering with the kidneys, although it is doubtful if any skin-eruption completely prevents the action of the cutaneous glands. The experiments of Senator and others were inconclusive; it is true that varnishing the skin of rabbits was followed by febrile disease and death, but it is difficult to exclude the toxic action of the varnishing material and the effect on the heat-regulating apparatus; moreover, such experiments cannot be performed on man. As pointed out above, patients suffering from

* I have recently been enabled by the kindness of Dr. Horder, to whom I am indebted for many suggestions in the early part of this paper, and to whom I desire to express my thanks, to see a patient under his care who, together with uræmic symptoms and an acute attack of arthritic gout, developed an eruption on the extremities and abdomen clinically indistinguishable from Pityriasis rubra pilaris. The skin eruption disappeared coincidently with the uræmic and gouty symptoms. The patient was the subject of granular kidney.

universal eczema of long standing are not specially subject to albuminuria, and the same holds good for ichthyosis and other diseases affecting large areas of the skin. Bulkley never saw a subject attacked with eczema succumb to a renal affection, but Thibièrge quotes instances in which a fatal result ensued. Cases have been described (as by Siruques) in which nephritis developed after the healing of an eczema, and one of Thibièrge's cases was of this nature; such occurrences must obviously be interpreted with caution. Brocq drew attention to various accidents which he thought were due to the suppression of a chronic eczematous eruption, but nephritis is not amongst them.

According to Thibièrge, the skin-disease which, next to eczema, is most often accompanied by albuminuria is scabies. Many, if not all, of the reported cases were due to absorption of the drug—usually balsam of Peru—used in the treatment,* but Thibièrge thought that scabies itself might be the cause of albuminuria. Mailhetard, Scheube, and Boyer referred to cases in which albuminuria occurred independently of treatment, but these are open to doubt, as no instances have been recorded in recent years. The same criticism applies to the cases of albuminuria associated with eruptions on the head, reported by Siruques and Boyer. Ecthyma and furunculosis have already been referred to. Several other skin-affections were quoted by Thibièrge as being supposed causes of nephritis, but in many of them the association of the two diseases has not been confirmed by later observers. Pityriasis rubra, however, is recognised as an occasional cause of nephritis, and Sequeira and Balean have drawn attention to the occurrence of albuminuria in disseminated Lupus erythematosus. The difficulty already referred to of distinguishing between albuminuria and nephritis has again to be remembered. Another important consideration relates to the possibility that a skin-eruption and nephritis occurring together in a patient may both be due to the same cause rather than the one depending upon the other. This view harmonises with the statement of Osler that "the importance of the poisons causing the skin-lesions of the erythema group is not sufficiently recognised as a cause

* Gassmann recently described a case of acute nephritis following the application of balsam of Peru for the cure of scabies, and gives references to other cases (*Münch. med. Woch.*, July 26th, 1904, p. 1345).

of acute nephritis." In his paper on "The Visceral Manifestations of the Erythema Group of Skin-Diseases" he mentions that there was acute nephritis in fourteen of his twenty-nine cases. The nephritis, he says, usually comes on at the height of the skin-lesion, or may follow within a week or ten days or a couple of months after its subsidence. There may be no dropsy, even when the nephritis is intense. The œdema of the skin-lesion may simulate the puffiness of the face in renal dropsy. The skin-lesions in his cases were purpura, urticaria, erythema, and œdema, occurring either separately or in combination.

Diseases of the Nervous System.

There is reason to think that acute nervous shock may play a part in the causation of cutaneous eruptions. Change of colour or loss of the hair and pigmentation are known to result from severe mental shock, possibly acting by way of the sympathetic system, and instances of pemphigus, Dermatitis herpetiformis, and other eruptions have also been reported as the result of violent emotion or nervous strain. Dysidrosis and Lichen planus are prone to occur in neurotic and hysterical subjects. I once saw an attack of the former in a medical man who thought he had contracted scabies, but developed instead a typical eruption of cheiropompholyx. Relapses of dysidrosis are apt to be occasioned by mental and emotional stress, and the same may be said of some varieties of erythema and eczema. Dr. Pringle has pointed out that seborrhoic eczema may occur in relation to nervous disturbance, and I have seen several of his patients in whom nervous strain and anxiety have been the exciting cause of recurrent attacks.

Chloasma is the result of reflex nervous disturbance, and pruritus is not uncommonly associated with an unstable condition of the nervous system and may be an indirect cause of some skin-eruptions. Of the cutaneous affections to which the insane are liable, ichthyosis, Adenoma sebaceum, and leucodermia, are among the most frequent. Instances of purpura, Herpes labialis, pemphigus, urticaria, pustular dermatitis, and psoriasis, accompanying various states of insanity are mentioned by Raschkow and others, but there is no reason to suppose that these diseases are directly connected with the mental state of the patients or occur with greater frequency than in the sane.

Deep pigmentation of exposed parts has been described by several authors and called "pseudo-pellagra," and brown discoloration of the skin, somewhat suggestive of Addison's disease, is met with in general paralysis (Hyslop). Other skin-affections which may affect general paralytics are hyperidrosis (Marandon de Montyel), and herpes, and bullæ sometimes occur on the extremities in the last stages of the disease. Artificial eruptions are often self-inflicted by hysterical and insane patients. Erythema, urticaria, pemphigus, neurotic excoriations, and gangrene, considered by van Harlingen to be true dermatoses and not factitious affections of the skin, pigmentation, hyperidrosis, and hæmatidrosis, have been found in connection with hysteria. Other rare conditions are hysterical œdema—Charcot, unilateral swelling of hysterical hemiplegia—Weir Mitchell, and gangrenous urticaria—Renaut. Skin-eruptions are rarely encountered in connection with *organic brain diseases*. Pigmentation has been found in association with cerebral tumours, as in a case recorded by Bourneville and Poirier. Mr. Kellock had a child under his care in the Middlesex Hospital, who had a tumour causing bulging of the skull and proptosis, and large patches of pigment on the skin of the back.

In the *spinal cord* posterior sclerosis is apt to give rise to cutaneous manifestations. Numerous eruptions have been described in connection with tabes dorsalis, but they are so varied and infrequent as to suggest a simple lowering of the nutrition and increase of the vulnerability of the tissues rather than a direct causative effect. According to Radcliffe-Crocker, the early stages of tabes may be attended by Erythema simplex and Erythema nodosum, urticaria—giant urticaria has been described by Charcot and also by Winfield—papular or lichenoid eruptions, eczema, Herpes zoster, pemphigus, pustules (like ecthyma), superficial and deep ulcers, and superficial gangrene. They appear coincidently with exacerbation of the lightning pains, and their distribution is, as a rule, limited to the course of the nerve along which the pain is felt. A patient recently attended Dr. Pringle's clinique for severe generalised pruritus associated with tabes.

In the later stages perforating ulcer of the foot, shedding of the great toe nail, glossy skin, leucoderma, petechiæ, ecchymoses, unilateral sweating, and œdema have been observed. Perforating

ulcer may also occur in syringomyelia, spina bifida, Friedreich's disease, general paralysis, compression of nerves or spinal cord by tumours, as well as in the neuritis due to diabetes, leprosy, or alcohol.

The influence of the spinal cord on the skin is shown in Morvan's disease, which is now regarded as a type of syringomyelia. The skin-phenomena are: multiple whitlows on the fingers and occasionally on the toes, with resulting necrosis, blueness of the skin, fissures, vesicles, bullæ, ulceration involving the tendon-sheaths, changes in the nails, pigmentation, glossy skin, and hyperidrosis (Stelwagon).

The association of sclerodermia with syringomyelia is referred to by Schlesinger, and Pospelow had a patient with syringomyelia who developed erythromelalgia and subsequently gangrenous Herpes zoster. Some authors attribute erythromelalgia to an affection of the lateral and posterior grey cornua—the locality which would tend to become involved in spinal gliomatosis.

Herpes and bullæ are often associated with slow compression of the cord and various herpetic and pemphigoid eruptions; and roseola, petechiæ, erythema, urticaria, and erysipelas have been seen in spinal meningitis (Erb).

Bed-sores occur in injuries and diseases of the spinal cord in which considerable destruction has taken place, especially of the grey matter.

Herpes zoster is the most familiar of the eruptions depending upon organic changes in the nervous system. The seat of the lesion in the primary disease is doubtful, but there is considerable evidence in favour of the view that it is situated in the posterior root ganglia. Head regards the disease as an acute specific infection analogous to acute anterior poliomyelitis. In the symptomatic cases the underlying nerve-lesions include myelitis, tabes dorsalis, general paralysis, compression of the cord in Pott's disease, and meningitis.

In myelitis the area occupied by the rash not infrequently coincides with the upper level of the anæsthesia or appears in the area of hyperæsthesia surrounding it (Head). As regards the association with tabes, in eight years Head only saw two instances of zoster; neither was complete. The eruption came out over a longer period than usual in spontaneous zoster (during four weeks in one case), and tended to recur. In both cases the eruption was situated in the territory previously occupied by intense lightning pains.

According to Willmott Evans a meningitis is the starting-point of the eruption in no inconsiderable number of cases; he states that zoster occurs in posterior basal meningitis and rarely in tuberculous meningitis, and in the two latter has a tendency to be bilateral; apart from its occurrence in the epidemic cerebro-spinal form of the disease, I have not found the association referred to elsewhere.

Of the conditions other than organic nervous diseases which are occasionally associated with Herpes zoster are dental caries and errors of refraction (Pernet), the former of which I have seen to produce recurrent attacks.

Numerous skin-affections occur in association with diseases of the peripheral nerves. Multiple neuritis may be accompanied by glossy skin, changes in the hair and nails, local or general sweating, œdema —in alcoholic cases—and rarely by bed-sores or perforating ulcers, but it appears to cause changes in the skin less often than does disease of single nerve-trunks, and especially division of single nerve-trunks. Bullæ on the fingers and toes are sometimes seen in the early stages of anæsthetic leprosy; they are small, numerous, occur on a painful surface, and are spontaneous. Those of advanced anæsthetic leprosy are large, solitary, occur on an anæsthetic part, and are usually excited by local causes (Crocker).

The cutaneous pigmentation of Recklinghausen's disease may be mentioned here, but its exact causation is unknown.

Perforating ulcer in connection with neuritis, due to diabetes, leprosy, or alcohol, has been already referred to.

The skin-lesions which have been observed to follow injuries or division of nerves are: a persistent variety of erythema—herpes, bullæ, ulceration (simple and perforating)—eczema, "glossy skin" (Weir Mitchell), defects of hair and nails, pigmentary changes, chronic œdema, and a condition resembling ichthyosis (Crocker). Erythema and local hyperidrosis or purpura may accompany severe neuralgia or occur as the result of nerve-injury.

Glossy skin is best seen in cases of injury of peripheral nerves; it is also found in non-tuberculated leprosy and in association with herpes, and may occur in gout and rheumatoid arthritis.

Facial hemiatrophy is variously regarded as an affecton of the sympathetic, a vasomotor disturbance or a tropho-neurosis. An interstitial neuritis of the fifth nerve has been found in one case, but in

this disease, and in others in which peripheral nervous changes have been found in association with cutaneous lesions, it is possible that the cutaneous and nervous changes are due to a common cause, or that the nervous are secondary to the cutaneous changes.

Many cases of morphœa, as well as of ichthyosis hystrix, linear nævus, etc., have a "nerve-area" distribution, and doubtless some of the first have been described as facial hemiatrophy.

Jacquet has recently advanced the hypothesis that Alopecia areata is a nervous result of peripheral irritation, chiefly of dental origin. The frequency with which dental caries occurs in people who do not suffer from Alopecia areata is against this view. (The same objection might be urged against any conclusion drawn from the association I have frequently noticed in hospital practice, both in children and adults, of pediculi of the scalp with Alopecia areata.)

Radcliffe-Crocker makes the following statements concerning the lesions of the nervous system etiologically related to cutaneous disease:

(1) That less serious consequences ensue from cutting off the nervous supply than from irritant or inflammatory lesions of the parts of the nervous system that affect the skin.

(2) That the kind of eruption produced by the nervous system varies greatly, often without any evident reason, when the nervous defect is apparently the same in place and kind.

(3) That the same eruption may owe its origin to any defective link in the nervous chain from the centre of the periphery.

(4) That the same kind of nervous lesion that at one time appears to excite an eruption or other nutritive defect in the skin even more frequently produces no change in the skin whatever.

(*To be continued.*)

CLINICAL NOTES.

By T. COLCOTT FOX, M.B., F.R.C.P.,

Physician for Diseases of the Skin to the Westminster Hospital, Visiting Dermatologist to the Metropolitan Asylums Board's Ringworm School.

I. A Case of Eczema Seborrhoicum with Spines.

Winifred T—, aged 11 years, a healthy-looking, well-formed child, was brought to the skin-department of the Westminster Hospital on January 18th, 1905, when the following notes were made:

"The scalp is encased in a sheet of dry, white, coherent scales, and this has been the condition more or less for some years. Here and there the encasement has cracked apart and some serum exudes. The child has Pediculi capitis. Behind the ears are diffuse, red, exuding areas; the face is free. On the trunk almost every follicle is slightly congested, and projected, and capped by a minute scaly crust. From many of such follicles issue spines of about one sixteenth of an inch in length, and when extracted by forceps they display a short intra-follicular plug. These spines appear to be less horny and hard, and more of a scaly nature than in Lichen spinulosus. The projecting follicles tend in places to be arranged in groups, or, more accurately perhaps, there are areas of healthy skin here and there. In addition to the general follicular type of eruption there are fawn-coloured patches, built up, however, of closely set follicular lesions, and some of these patches are covered with impetiginous scabbing. The limbs are affected very much as the trunk, but to a less extent, and on the legs there are also somewhat larger papules. On the hands are the remains of old impetiginous lesions. The other children in the family are healthy."

My friend Dr. Adamson was kind enough to furnish me with the following notes, illustrated by the sketches reproduced: "Crushed between two slides a spine crumbles up into single flat epithelial scales, with but little *débris* and no fat-globules. In stained specimens (Unna's polychrome methylene blue) most of the cells retain their nuclei. Several diplococci are present, and two doubtful three-in-chain. No leucocytes were present. A culture was obtained by placing a whole plug in broth at 37° C. Three days later

an examination of the culture displayed cocci, single and in groups and twos, also long chains and twos of streptococci, finer and less deeply stained."

The child was admitted to the wards as an in-patient, and made a rapid recovery. The treatment consisted in daily washing the child thoroughly with Jeyes' creosote soap, followed by a warm bath, after the bath an ointment consisting of equal parts of Ung. sulphuris, Ung. acidi borici, and Ung. acidi salicylici, each according to the British Pharmacopeia.

This eruption I diagnosed as *Eczema seborrhoicum* for want of a better name, complicated by impetigo originating from pediculi of the



Spines.



Spine crumbled into flat epithelial cells.

scalp. Those who read the description and look at the photographs reproduced may question the accuracy of the diagnosis. I was influenced chiefly by the general characters of the eruption and the condition of the scalp; but further, the absence of any family or personal history of tuberculosis is important, for the great majority of cases of Lichen scrofulosorum present other tuberculous lesions. As to Eczema seborrhoicum it is to be observed that miliary follicular papules are frequently met with in so-called "flannel eczema" of the adult, and sometimes even to the exclusion of other types of lesion on the trunk and limbs. Sabouraud, however, does not recognise his pityriasis as occuring before adolescence, yet eruptions which are in many aspects similar to various phases of Eczema seborrhoicum of the

adult are common in children, and I have been unable to distinguish them clinically. I discarded Lichen spinulosus, as in my experience it occurs mostly in symmetrical patches on certain sites of predilection, and the spines are more horny. The diagnosis from Lichen scrofulosorum is more delicate; and though this point is but little discussed in text-books, Hallopeau and Bureau* and Thibièrge† in France and Klingmüller and Hartung‡ in Breslau have pointed out how closely in aspect and distribution these eruptions may resemble one another. Kaposi observed Lichen scrofulosorum complicated by secondary eczema. If we are to accept Boeck's views, the problem is greatly complicated, for he recognises three perifollicular tuberculides, viz. (1) a Pityriasis simplex of the face of children, occurring in ill-nourished children, nearly always, it is said, associated with adenopathy of the neck and frequently with Lichen scrofulosorum of the trunk; (2) an Eczema scrofulosorum of children and young adults, arising like Lichen scrofulosorum and with similar localisation, but forming scaly, red patches, sometimes weeping; (3) a disseminated, perifollicular, papulo-squamous tuberculide, with lesions the size of hemp-seeds, capped by a central corneous crust or epidermic scale. Finger had two models executed of what he calls Eczema scrophulosorum. I regret that I was unable to obtain material for sections, and that I did not inject the old tuberculin to see if the eruption reacted.

The occurrence of spines in various follicular eruptions I need not discuss at length, as Dr. Adamson has so recently dealt with the matter at length in this Journal. If my case is one of Eczema seborrhoicum, as I believe it to be, it is the first in which spines have been recorded.

Since writing these notes I have met with a strikingly similar case, but free from follicular spiny plugs.

William R—, a healthy-looking farm boy, aged 16 years, was sent to me with an eruption of about a month's duration. There was moderate diffuse pityriasis of the scalp and red-tinted macules with adherent scales on the face. On the neck larger reddened, scaly patches were slightly infiltrated. Over the shoulders and upper trunk

* "Sur un cas typique de lichen scrofulosorum, la nature et ses relations avec l'eczéma seborrhéique." *Ann. de Derm. et de Syph.*, 1896.

† "Folliculites miliaires rappelant le lichen scrofulosorum chez un tuberculeux." *Soc. de Derm. Franç.*, February, 1898.

‡ *Breslauer Derm. Vereinigung*, 1903–1905.

in front were disseminated red, miliary, follicular papules, tending on the chest to occur in clusters as in Lichen scrofulosorum. On the abdomen and back of the trunk there were only a few of these papules. The arms, especially the extensor aspects, were thickly strewn with slightly scaly patches and some isolated miliary papules. Close observation demonstrated that the apparently diffuse patches were built up of coherent miliary papules. Here and there was a miliary vesico-pustule. The backs of the hands were similarly involved. The picture on the legs was different, as though small patches were thickly dotted about, they were nearly all crusted over, apparently from scratching. It is too early to record the result of treatment, as I have so far only dried up the exuding traumatised patches on the legs.

II. A Case of Granulosis Rubra Nasi.

A healthy-looking, well-built boy, Godfrey B—, aged 9 years, came to the skin-department of Westminster Hospital on February 22nd, 1905, to be healed for an eruption on the end of his nose, which had attracted attention for two or three months past. On the end of the nose was a small crust, surrounded by a number of isolated, red, semi-translucent, rather deep-seated, shortly-projecting nodules the size of a pin's head. I could not obtain any clue to infection or family history of tuberculosis, but I made the error of diagnosing Lupus vulgaris. These nodules displayed a deep apple-jelly-like infiltration when pressed on by a glass, and were indistinguishable from the classical nodules of Lupus vulgaris such as recur on scars. The crust having been cleansed away and the very superficial excoriation healed, I ordered strong salicylic acid plasters to be applied, without much curative effect. On June 14th Dr. Adamson, whom I was fortunate to have assisting me, called my attention to some half-dozen small vesicles or clear cysts which had arisen on the affected area, and more attentive study of the case convinced me of its real nature.

The case proved to be very intractable to treatment, and when the cysts disappeared the original nodules remained much as before. Free sweating of the end of the nose was noted on several occasions.

This is the first example of this affection that I remember to have come to my own clinique, although I have spent a great part of my

life at children's hospitals. I have, however, recently observed two or three hydrocystoma lesions on the end of the nose associated with free local sweating in a boy I was examining for ringworm of the scalp. Other cases that I have seen under the care of other physicians have illustrated the diverse aspects that the affection may present. I believe I am not the only one to have diagnosed the miliary, semi-translucent, nodular phase as Lupus vulgaris. The cystic phase is that of hydrocystoma, and in the child exhibited recently at the Dermatological Society of London by Dr. J. M. H. MacLeod, the end of the nose was at that time apparently the seat of a fine red, papular folliculitis. Conspicuous sweating may be present or absent when the case comes under observation.

III. A Case of Ringed Hairs (Trichonosis versicolor, Leucotrichia annularis, Canitie annelée) associated with Diffuse Alopecia.

Elizabeth B—, aged 25 years, married, applied at the skin department of the Westminster Hospital on February 24th, 1904, suffering from alopecia of the scalp of about two months' duration. The fall of hair was diffuse and profuse, so that there was thinning over the whole scalp to such an extent that she was almost bald except for a few isolated strands of hair. Here and there also were short broken hairs with atrophied roots, without being typically clavate stumps. The remaining long dark brown hairs had a "dusty" appearance, and on close examination were seen to be ringed throughout their whole length alternately with dark and pale zones (pili annulati). She sleeps well and usually enjoys good health, but of late has had daily marked headaches. She was ordered Mistura Ferri arsenicalis, and locally Linimentum cantharidis compositum. On March 2nd the eyebrows and eyelashes were falling. As the scalp was blistered by the liniment the local treatment was stopped for a week, and then the Ung. hydrargyri oxidi rubri et cantharidis was ordered. On March 23rd all the hair had fallen from the scalp and face. The patient continued the treatment until January, 1905, when it was noted that the eyelashes had grown, and that some new hair was appearing at the outer end of the right eyebrow. The arsenic was discontinued as the bowels were getting habitually loose, and an iron tonic was substituted. Later the scalp hair and eyebrows

grew, and a cure seemed assured. However, in the spring of 1905 ringed hairs were again observed, the eyebrows fell, and diffuse alopecia again set in on the scalp. In May, 1905, fine down reappeared on the scalp, and the hair growth has continued steadily since. The nails have always been unaffected. No history could be obtained of any other case in the family. The photograph under a low power by reflected light illustrates the appearance of the hairs very well, and brings out the details. The spindle-shaped white zones, which are abnormal, are about $\frac{1}{75}$th of an inch in length and the normal pigmented zones about $\frac{1}{500}$th of an inch, but though to the naked eye an impression of regularity of intermittence is given, the respective zones vary somewhat in size in the length of the hair. The rhythmical dystrophy which occurs in the growth of the hair appears to allow the entrance of air to the dystrophic segments, and hence the white rings. Erasmus Wilson discussed the possibility of the white segment being formed at night and the normal hair in the daytime, but found the theory could not be entertained. However, Professor C. Stewart, of the Royal College of Surgeons of England, told me some years ago that a pupil of his had these ringed hairs, and he determined in that case that the pigmented and colourless bands together were in length equal to the growth in twenty-four hours. A somewhat similar dystrophy occurs in the congenital defect known as *Monilithrix*. This Leucotrichia annularis appears not to be congenital. In my case it is almost certain that the banded condition only occurred as a preliminary stage of the diffuse alopecia, and it appears to be the first case met with in this Association. In Frew's case, mentioned by Professor M'Call Anderson, the father was hairless. G. Norman Meachen has recently collected the literature, in the *British Journal of Dermatology* for March, 1902.

SPONTANEOUS SYMMETRICAL ECCHYMOSES OF THE EYELIDS AND CONJUNCTIVÆ, WITH EXTRAORDINARY EXAGGERATION OF ALL THE TENDON-REFLEXES PRECEDING FATAL URÆMIC COMA.

By F. PARKES WEBER, M.D., F.R.C.P.,
Physician to the German Hospital, London, and to the Mount Vernon Hospital, Hampstead.

H. R—, aged 22 years, a Jewish tailor from Russia, was admitted under my care at the German Hospital on July 3rd, 1906. The patient had generally apparently enjoyed good health. He stated that two months before admission he had suffered from gonorrhœa and that since then he had had troubles in regard to micturition. Eight days before admission, suddenly and without any injury or special coughing, ecchymoses appeared in both upper eyelids and both conjunctivæ. The patient seemed not to have felt sufficiently ill to keep in bed, nor did he wish to remain in bed when he was admitted. There was no history pointing to hæmophilia.

Condition in the hospital.—The patient was a weakly-built man, with dark, blotchy ecchymoses of both upper eyelids and with bilateral subconjunctival hæmorrhages. There were no hæmorrhages elsewhere. The exaggeration of the knee-jerks was extreme; the slightest tap over the patellar tendon (when the knee-joint was bent) caused the leg to be violently jerked forward. Similarly, if the patient lay on his side a tap anywhere on the Achilles tendon caused great contraction of the calf-muscle, but the movement of the foot was somewhat less sudden than that of the leg on tapping the patellar tendon. The triceps jerks and supinator jerks were on both sides exaggerated in the same way. There was sometimes great ankle-clonus to be obtained, but this varied considerably on different occasions, like the clonus often met with in functional nervous affections. On one occasion, when the patient was on his side in bed and temporarily supporting the upper part of his body with one hand on the bed, I noticed a clonus of the upper extremity (from the flexed elbow-joint) resembling the ankle-clonus (or "heel-tap") in the lower extremity. Just as remarkable as the state of the tendon-jerks was the local muscular contraction obtained by sharply tapping the muscles—*e.g.* of the chest-wall or arms. There was no Babinski's

phenomenon; the plantar reflex (when distinctly obtained) was of the normal (flexor) type. There were no Romberg's sign, no nystagmus, and no intentional tremor. No evidence of disease was discovered in the heart or lungs or in the large abdominal viscera. The gums were not swollen or affected in any way to suggest scurvy. Ophthalmoscopic examination showed nothing abnormal, excepting that the fundus oculi was rather pale (Dr. Gruber). Examination of the blood showed decided anæmia and polymorphonuclear leucocytosis; the hæmoglobin was only 45 per cent. of the normal by Haldane's method; the red cells numbered 2,185,170 in the cubic millimetre and the white cells 28,750. There was very frequent micturition, and the urine (of acid reaction) contained pus, in which no gonococci or tubercle bacilli were detected.

Later on, July 13th, by sounding the bladder my surgical colleague, Dr. E. Michels, detected the presence of a vesical calculus, but the operation for its removal was prevented by the gradual onset of coma and the patient's death (on July 17th).

In the hospital no fever was observed excepting on the evening of July 6th (100·4° F.); the temperature was subnormal (about 96° F.) during the last days of life. The urine (daily amount 400 c.c. to 1700 c.c.) contained more albumen than could be accounted for by the amount of pus present; no tube-casts or red blood-corpuscles were detected (Dr. Daser) in the sediment. The anæmia and leucocytosis both progressed, for on July 16th a blood-count showed only 1,950,000 red cells to the cubic millimetre, with 33,440 white cells. The blood-pressure was low. On one day the skin of the face was covered by a white powder, suggesting a deposit of urea left by rapid drying up in hot weather of a urea-containing secretion from the skin, but microscopical examination (Dr. Daser) showed the powder to contain, if it did not entirely consist of, epidermal *débris*. The drugs given were: urotropin in Wildungen water (Helenen-Quelle), on account of the urinary condition; some doses of calcium lactate, on account of the apparent hæmorrhagic tendency; but likewise lemon-juice in water, on account of the possibility of the condition being partly scorbutic.

With great difficulty permission to make a *post-mortem* examination was obtained. The urinary bladder contained a solitary, oval-shaped calculus, measuring 2 × 1½ × 1 inches, having a very hard,

rough, brownish surface, like coarse sandpaper, this surface evidently consisting largely of calcium oxalate. The vesical musculature was hypertrophied; both ureters were much dilated and hypertrophied, and both kidneys were hydronephrotic, especially the right one. The heart weighed 15 oz., and showed hypertrophy of the left ventricle. Nothing else remarkable was found. The liver (weighing 48 oz.) and the spleen (weighing 4½ oz.) were not enlarged. We were not permitted to remove pieces of the kidneys and other viscera for microscopic examination.

It seems clear that in this case the ecchymoses and the remarkable increase of the tendon reflexes must be regarded as connected with the onset of uræmia. Increase of knee-jerks probably commonly accompanies the onset of uræmia, but I think the extreme exaggeration of the various tendon-jerks noted in the present case must be very rare indeed.

A phenomenon to which I have not yet alluded was observed before the patient became comatose, namely a remarkable long-lasting shivering or tremor, resembling a rigor, but not followed by fever. In a fatal case of chronic interstitial nephritis (with large kidneys) in a man aged 50 years I have observed a still more remarkable rigor-like attack associated with the final uræmia, but in that case (unlike the present one) headache, vomiting, and neuro-retinitis were likewise present.

In conclusion, I must acknowledge my indebtedness to my house-physician, Dr. Daser, for the trouble he has taken in the investigation of various points connected with the case.

EDITORIAL.

ON LEPROSY AND FISH-EATING.*

In a critical discussion on the subject of fish-eating and its relation to leprosy, *apropos* of Mr. Jonathan Hutchinson's recent publication on the subject, Dr. Hansen makes a number of pertinent observations which are of special interest in connection with this vexed question. Mr. Hutchinson's arguments fall under two heads. He tries to prove (1) that fish is eaten everywhere where leprosy prevails; and (2) that

* G. Armauer Hansen, *Scot. Med. and Surg. Journ.*, July, 1906, p. 44.

fish *per se* does not produce leprosy, but only badly cured fish, which is more or less decomposed. These hypotheses Dr. Hansen deals with *seriatim*. With regard to the first he points out that in certain parts of Eastern Norway, where there is no leprosy, the people prepare a special form of trout, which is allowed to decompose to a certain degree before being salted, and is precisely in the condition which, according to Mr. Hutchinson, should cause leprosy. Mr. Hutchinson also holds that the dried cod which is exported from Norway to Spain and Portugal is responsible for the leprosy there; but, as Dr. Hansen observes, the dried cod is not decayed, so why should it be regarded as a cause? He points out also that leprosy diminished in Norway while the population was still in a large measure using decayed fish as food. As to the second point he first refers to certain statements which he believes to be incorrect, such, for example, as that the leprosy bacillus can be transformed into the tubercle bacillus, and that the lepra bacillus has not been demonstrated in the maculo-anæsthetic lesions. But the weak point in the whole fish hypothesis is that the bacillus has not been found in fish, so that the theory is without basis and "altogether destitute of proof." He also refers to the danger of believing patients when they say that they have never seen a leper because lepers are rather ashamed of their disease, and apt to deny having seen or been in contact with lepers, and hence it may be almost impossible to get a history of contagion. He then cites a series of cases which were explicable by contagion, and draws attention to the great diminution in the number of lepers in Norway since segregation was adopted.

This contribution of Dr. Hansen's is of great interest at the present time, when the fish theory of leprosy has been placed so prominently before the public and attracted so much attention, and when it is being suggested that segregation of lepers is needless cruelty. It comes from the pen of the discoverer of the bacillus of leprosy, and one of the greatest living authorities on the subject. There is a statement above which is of special interest, and that is the remark that the dried fish from Norway caused leprosy in Portugal. That may or may not be the case, but for many years large quantities of dried cod have been shipped from the Shetland Islands to Spain and Portugal. This cod is dried in the same way as the Norwegian cod. The Shetland natives eat much of this fish, and much more

that is not so carefully dried and salted as that for export, and is more or less decayed, and yet cases of leprosy are now unknown in those islands.

CURRENT LITERATURE.

A CASE OF ACUTE SEPTIC PEMPHIGUS. By Geo. W. Crary. (*Journ. Cut. Dis.*, January, 1906.)

Under the title "Acute Septic Pemphigus," Dr. Geo. W. Crary reports from the New York Lying-in Hospital the case of an infant who on the fifth day after birth developed some vesicles grouped about the left angle of the mouth. The vesicles early ruptured, leaving a raw surface Other vesicles appeared on face, neck, chest, and arms, and the later ones were short-lived, flaccid bullæ, leaving areas denuded of the horny layer. The infant died eighteen days after commencement of the eruption. A sudden rise of temperature to 104° F. with speedy fall to subnormal occurred on the third day after birth, and after the evolution of the eruption there was some irregular fever. The autopsy showed some lung congestion and small areas of broncho-pneumonia, congested spleen, fatty liver, degenerated kidneys. A small collection of pus was found in the umbilicus in a fusiform dilatation of the partially obliterated left hypogastric artery. The *Staphylococcus pyogenes aureus* and *albus* were cultivated in this pus and in the blood from the liver and spleen, and the *S. aureus* from the general circulation. A section of excoriated skin displayed diplococci, but their exact site is not mentioned. The diagnosis reached was staphylococcus septicæmia. It is significant that another new-born infant had Impetigo contagiosa in the same ward a few days before, and the superficial bullæ suggest a streptococcic causation, but apparently no special method was adopted to try and isolate this organism.

T. C. F.

A CASE OF UNDETERMINED TROPICAL ULCERATION INVOLVING THE NOSE, PHARYNX, AND LARYNX, WITH HISTOLOGICAL FINDINGS—by John A. Fordyce: **AND SOME GENERAL CONSIDERATIONS REGARDING CLINICALLY SIMILAR CASES IN OCEANIA AND ELSEWHERE**—by W. F. Arnold. (*The Journ. of Cut. Dis.*, January, 1906 [illustrated]).

J. B –, coloured, aged forty-four, native of Panama, applied at the City Hospital, New York, complaining of nasal obstruction and ulceration, causing continued muco-purulent discharge, bleeding, pain and difficulty in breathing. It began six years before, when he was in Panama, where he worked on a rubber plantation. He had suffered from malaria, but not syphilis, and three years before the onset of the present illness he had some sores on the arms, attributed to the irritating juice of a climbing plant. The present symptoms began by an annoying and offensive muco-purulent nasal discharge and a gradually increasing difficulty in breathing. After six months a polyp was removed in Colon, but his troubles increased, and a year later small ulcers appeared about the nasal orifices. On admission to the City Hospital he was rather emaciated, and the nose was broad, ulcerated at the external meatus, and the tip sunken. The lungs were dull over both apices, with prolonged and high-pitched respiratory murmur and râles.

Pulse small and feeble, muffled heart sound except accentuated aortic and a slight apical systolic murmur. Urine was normal. The septum nasi was destroyed, and the entire anterior nares one necrotic sloughing mass. The uvula was gone, and the soft palate had a worm-eaten appearance. The larynx and pharynx showed old cicatricial contractures with here and there ulcerating areas. There was an ulcerated patch with raised border and necrotic centre just below the right inner canthus of the eye from extension from nasal duct, also some scars on arms and front of legs. There was some irregular febrile movement. Mercury was given internally by inunctions and hypodermatically, and iodide of potassium in increasing doses until the limit of tolerance in more than three hundred grains daily was reached, but without any good result. Repeated examinations of smears and sections of excised tissue failed to demonstrate the presence of tubercle bacilli, and the patient did not react to tuberculin. There was no characteristic tuberculosis of guinea-pigs produced by inoculations. In one inoculated subcutaneously a spreading ulceration formed within three months. As syphilis and tuberculosis seemed to be excluded it was thought that the affection might be analogous to that described by Breda in Italian emigrants returning from Brazil. Breda described a malady distinct from syphilis and yaws, beginning in a bulla or pustule which ends in remarkably indolent ulceration with sharply defined margins and a gray nodular base. It involves the skin, but more frequently the palatine vault, throat, larynx, and trachea.

Histologically the lesion proved to be a granuloma, which might readily be mistaken for tuberculosis with its giant cells, and was difficult to distinguish from syphilis. Blastomycosis, actinomycosis, rhinoscleroma, and leprosy were differentiated by the absence of their specific organisms.

Arnold found a similar affection very prevalent in Guam in 1902. From published cases he infers that it occurs in tropical America (Brazil, Chili, etc.), in the South Seas, and in Ceylon. The usual history in Guam is that of a slight pharyngeal, tonsillar, or nasal ulceration, without any notable constitutional symptoms. The ulceration spreads under superficial sloughs through the pharynx and nose. The palate and nasal septum soon disappear. The larynx usually escapes without notable change. The eyes are often involved and destroyed by extension from the lachrymal ducts, and the orbits become filled up with granulation-tissue and cicatrise. The entire nose may be removed. The tongue, cheeks, lips, and posterior wall of the pharynx are little involved. Extensive destructive ulceration elsewhere is uncommon. It is not a fatal malady. It may be seen at all ages and in families. It is absent from the other islands of the Ladrone (or Mariana) group. Arnold quotes a number of interesting references.

T. C. F.

(Glanders is another malady in which destructive ulceration may be localised to the nose and mouth for a long time.—T. C. F.)

EPIDERMOLYSIS, A STUDY OF SOME CASES OF, WITH REMARKS UPON THE CONGENITAL ABSENCE OF ELASTIC TISSUE. By M. F. Engman and W. H. Mook. (*Journ. Cut. Dis.*, February, 1906.)

The authors report four cases, two in the service of Dr. L. Duncan Bulkley. In Case 1, bullæ were first noticed at six and a half years of age; in Cases 2, 3,

and 4, two days, a few hours, and about the second year after birth respectively. In the first three cases there was no history of other cases in the family: in the fourth the family history was very striking through several generations.

In Case 1 the lesions could be produced on any portion of the body by vigorous rubbing with a dry towel, or by striking the surface severely. In a few moments after such a trauma an erythema appeared, followed in about five minutes by slight tumefaction and later by a wheal. The centre of the lesion would then become elevated, paler, and gradually a bleb would form, thus requiring from twenty to thirty minutes. By grasping a fold of the skin firmly on any portion of the body between the thumb and index-finger, and at the same time using severe traction, the epidermic layer would suddenly give way and slip off from the underlying tissues in the shape of the figure 8. This effect could not be brought about in four cases of Pemphigus vulgaris.

Histologically in the normal skin the authors found œdema of the epidermis, a succulent horny layer, normal granular layer, "colliquation" in many cells of the basal epidermic layers, dilatation of the intercellular channels; also œdema of the cutis, dilatation of the lymphatic channels and vessels (most marked in the upper portion), papillary pegs therefore swollen, slight increase of cells about the vessels, *absence of elastic tissue in the papillary and subpapillary regions of the derma, and sparsely distributed and deformed in the deeper regions.* (The authors do not state definitely where this normal skin was obtained, but it was presumably in the periphery of the lesions excised.)

The bulla examined was formed by the lifting up of almost the entire epidermis from the derma. The floor was a narrow line of flattened out epithelial cells. The contents showed epithelial nuclei, degenerated epithelial cells, a few leucocytes, lymphocytes, granular *débris*, and fibrin. About the bullæ numerous mitoses showed that even in four hours after injury an effort at repair was going on. Vessels were enormously dilated and the cellular elements about them increased. The elastic tissue is absent here in the same region as in the normal skin. The authors refer to Stanislawski's observations on the disappearance of elastic tissue in this affection.

A milium-like body was found on section to be seated in the papillary region and to consist of a connective-tissue capsule *without elastic fibres* enclosing several rows of flattened epithelial cells, within which is a cavity partially filled with concentric layers of cornified epithelium and in the centre a granular homogeneous detritus. The authors agree that the cyst is probably formed from an obstructed sweat-duct. T. C. F.

THE PRODROMAL ERYTHEMA OF VARICELLA. Henry G. Anthony. (*Journ. Cut. Dis.*, February, 1906.)

The author records two cases of erythema in chickenpox which he believes were cases of prodromal erythema in every way analogous to that of variola.

Case 1.—A boy, aged 2 years, not taking medicine, felt sick and poorly one morning, and displayed a rash on his abdomen and chest. Six hours later Anthony found a universal bright red erythema, not punctiform as in scarlet fever; temperature 104; no enlarged cervical glands; no inflammation of the throat; tongue not coated or of strawberry appearance; conjunctivæ watery. Next morning the temperature was normal, the erythema had disappeared, and both the patient and his twin-brother had the well-marked eruption of varicella.

Case 2.—A girl, aged 2 years, poorly nourished and ill-developed, and not taking medicine, was noticed to have a redness of the skin one morning not ushered in by any prodromata. At 5 p.m. the temperature was 101 F., pulse rather rapid, no sore throat, no enlarged neck or groin glands, eyes watery, a dry, measle-like cough. The rash was generalised, a bright red scarlatiniform erythema, but not punctate. There were three or four large vesicles on the chest, one on the chin, one umbilicated lesion, and three superficial flat papules. The following day the erythema had disappeared without desquamation and a well-marked eruption of varicella had evolved.

(The author says that it is not recognised that prodromal erythema may appear in varicella. Clarandon Marie, "Les Eruptions dans la Varicelle," *Thèse de Paris*, 1894, Louis de Bourdineau, *Thèse de Paris*, 1895, and Georges Daverède, "Les Rashes Polymorphes dans le Varicelle," *Thèse de Paris*, 1899, collected cases.) T. C. F.

VERNIX CASEOSA, CONGENITAL SEBORRHŒA, AND FŒTAL ACNE. Jacquet and Rondeau. (*Ann. de Derm. et de Syph.*, January, 1905, p. 33.)

While the vernix caseosa contains a large proportion of free fat, staining with osmic acid, it contains in addition much epithelial *débris* and cholesterine. While present in abundance in about 41 per cent. of a large series of cases of new births, it was entirely absent in 17 per cent. The coating is not usually general, but has certain sites of election where it is more abundantly found. The cellules, which constitute the epithelial portion of the vernix caseosa, are of somewhat special type, resembling the degenerated cells found in Molluscum contagiosum, and are, in Jacquet's opinion, due to faulty keratinisation. Several of these cells retain their nuclei.

In certain new-born children, and even in the prematurely delivered fœtus of the later months of pregnancy, an eruption of milium-like grains on the face has been noted. These lesions are sebaceous in character and their development is synchronous with the establishment of differentiation of sex (from the fourth month). Occasionally the base of these lesions is red and inflamed, and the condition is indistinguishable from Acne indurata. Histological investigation of these lesions shows dilatation and often obstruction of the sebaceous follicle at its orifice. The contents of these plugs consist of twisted lanugo hairs, sebaceous matter, and a colourless oily fluid which is not fat or eleidine and its character is as yet undetermined.

The position where the covering of the vernix caseosa is found in excess, the posterior plane of the body, coincides with the positions of atavistic ultra-development of hair. The pilo-sebaceous system in these parts is more active in early infancy than at any time later. Are there any constitutional states or diseases that are associated with this ultra-development of hair coupled with an excessive degree of vernix caseosa? Jacquet has examined 240 new-born children for the purpose of elucidating this question, and is satisfied that it is much more abundant in children born of parents the subjects of syphilis, tubercle, and alcoholic disease. He considers that this proposition is "incontestable." "Vernix caseosa is an acute kerato-seborrhœa, produced by pathological factors derived from the parental plasma, the sites of election being determined by cutaneous excitation occurring during fœtal life." He further found, in 274 cases examined,

a distinct relation between maternal seborrhœa and other occurrences of miliary sebaceous eruptions in children. He therefore regards these eruptions as inherited, and he seeks to establish an extremely interesting analogy between sexual differentiation with increased sebaceous flux and sexual maturity with its attendant period of increased sebaceous flux. E. G. L.

THE ACTION OF X-RAYS ON NORMAL EPIDERMIS AND UPON EPITHELIOMATOUS TISSUES. Dalous and Lasserre. (*Ann. de Derm. et de Syph.*, April, 1905, p. 394.)

This is an observation conducted in Professor Audry's laboratory at Toulouse. An epitheliomatous growth was treated by nine applications of X-rays, and the skin upon which the growth was situated was then excised and examined. The clinical appearance at this time was that of two small elevations upon an intensely reddened skin. Separate examination was made of the elevations and the surrounding skin, and in both cases the findings are described in great detail. In the second case the papillæ of the corium had disappeared, the epidermis was thinned, the granular layer was somewhat increased in thickness, the upper cells of the rete vacuolated in places; the chief changes were visible in the germinative layer, in which the cells were frequently isolated, their intercommunications apparently being dissolved, and the cells were frequently atrophied or vacuolated. The collagen bundles were compressed and in some places had apparently disappeared before the overgrowth of elastic fibres, except in the near neighbourhood of the epitheliomatous elevations, and here the elastin was almost absent. The vessels were unchanged, except quite near the epitheliomatous part of the section, where there was Endarteritis obliterans.

The epitheliomatous elevations.—The changes which take place in these positions are very similar to those recorded above as produced in the non-affected skin. The same alteration of cells in the germinative layer is noted, dissociation and vacuolation being the most marked changes. In the corium there is a pronounced œdema of the connective tissue, with reticulation, neoplastic cells and connective-tissue cells being found in the meshes of the reticulum. There is considerable cellular infiltration around the epitheliomatous masses, this infiltration consisting chiefly of mononuclears. The lymphatics are dilated; the arterioles are the subjects of extensive endarteritis, some of them being entirely obliterated by this process. From this it follows that since the X-rays exert a special action upon the cells of the germinative layer, those epitheliomata which are derived from that layer (baso-cellular epithelioma, tubular cancer) do better with X-rays than the epitheliomata derived from the cells of the superficial layers of the epidermis (spino-cellular epithelioma, "lobular cancer"). E. G. L.

THE SYMBIOSIS OF THE BACILLUS FUSIFORMIS (Vincent) WITH A SPIRILLUM; ITS DIFFERENT PATHOLOGICAL EFFECTS. Vincent. (*Ann. de Derm. et de Syph.*, May, 1905, p. 401.)

The *Bacillus fusiformis* described by Vincent is lozenge-shaped, 1 μ to 1·5 μ wide in the centre, 6 μ to 12 μ in length, rectilinear, non-Gram-retaining, reproducing by segmentation, growing in bouillon or agar to which one third of serum, preferably human, has been added; aerobic and anaerobic, non-motile; its culture has a fœtid odour.

The spirillum with which it is usually associated is motile, with numerous

spiral twists, stains less deeply than the associated bacillus, and has so far not been grown on culture media. It does not retain Gram.

The *Bacillus fusiformis* is a very widespread organism: it is found almost constantly in the mouths of healthy persons, in the tartar of the teeth, and in the intestinal evacuations of man, the dog, and the cat. It is very frequently found in the soil. Its ubiquity explains the frequency of its presence as the cause of diseases of which hospital gangrene, phagedænic tropical ulcer, Vincent's angina, hospital sore throat, ulcerated membranous stomatitis, noma, and cancrum oris are examples. The association of these two microbes becomes pathogenic only in persons who are exhausted by diseases such as phthisis, syphilis, malaria, or septic infections. E. G. L.

PREMYCOSIC PUSTULAR DERMATITIS. Audry. (*Ann. de Derm. et de Syph.*, May, 1905, p. 432.)

The first symptoms occurred in 1900, when the patient, a woman of Toulouse, was 46, and took the form of raised red patches on the face. These completely disappeared for about ten weeks. Then some vesicles were observed on the palms and soles which burst and were itchy. During the following eighteen months these symptoms were observable from time to time. She was then seen by Audry, who considered the disease to be either eczema or artificial dermatitis. After she had been four months in hospital a sudden generalised eruption of small, prominent pustules the size of a pin's head and surrounded by a red halo was observed, and a tentative diagnosis of "Dermatite polymorphe douloureuse" was made.

Arsenic was given and the eruption died down, leaving simply redness of the face and palms. The general health had remained constantly unaffected, and the patient was dismissed from hospital. A visit to Luchon resulted in a second apparently eczematous outbreak, lasting several weeks. She was seen again by Audry two and a half years after her discharge from his clinique and was then the subject of undoubted Mycosis fungoides, the diagnosis being confirmed by histological examination. E. G. L.

NOTE ON A CASE OF LEPROSY. Rochet and Billet. (*Ann. de Derm. et de Syph.*, May, 1905, p. 422.)

The patient was sent on military service to Cayenne and was in the tropics for two years. Some twelve years later he showed the first symptoms of leprosy in sensations of formication and pricking in the feet; these were followed by the eruption of bullæ on legs and knees; still later came the characteristic nodules all over the body, accompanied by the usual disturbances of sensibility.

Histological examination was made of a nodule and masses of bacilli demonstrated in the tissues. Bacilli were also found in the nasal mucus, but the blood proved sterile. E. G. L.

A CASE OF SYSTEMATISED POROKERATOSIS. Truffi. (*Ann. de Derm. et de Syph.*, June, 1905, p. 521.)

The patient, a boy aged 13 years, was one of ten children and the only one so affected. The mother had some lesions on the face. The disease had commenced, in the boy's case, at the age of eleven months. At the time of the record he had a very extensive eruption, but almost wholly limited to the left side of the body, the cheek, neck, chest, thigh, leg, foot, and hand on this side being occupied by

a figured, gyrate, and linear eruption, well shown in five photographs which illustrate the text. The conjunctiva of the left eye was altered, and the lashes of the lower lid absent in its inner half. On the right cheek, and still more markedly on the left cheek, there were brown pigmented patches, limited in places by the characteristic raised edge. The mucous membrane of the palate on the left side was altered, being unusually red in places, in others showing depressed atrophic patches; on the scalp, where these lesions were present, the hair was denuded by the later atrophy (recalling Brocq's "pseudo-pelade").

Histological examination of (1) a verrucose patch, (2) a macule, (3) part of the linear eruption was made, and showed thickening of the epidermis, imperfect keratinisation, perivascular infiltration, with lymphocytes and mast-cells, with absence of glandular orifices. The lesions tend to follow the course of Voigt's lines, and Truffi considers that porokeratosis is of a "nævic" nature, and that the disease enters into the category of nævi. E. G. L.

METASTATIC INFLAMMATIONS OF THE SKIN DUE TO GONOCOCCI. Audry. (*Ann. de Derm. et de Syph.*, June, 1905, p. 544.)

The patient, a young man aged 19 years, noticed a urethral (gonorrhœal) discharge on March 5th, 1905. The flow ceased in three days, and was succeeded by articular pains and fever, and finally by a scarlatiniform eruption, occupying the thighs, buttocks, abdomen, neck, and arms. This disappeared in a few days, leaving an erythematous eruption on the knees and wrists exactly like Erythema multiforme. The erythematous patches began to show minute points of suppuration, which coalesced into an abscess, which was incised, the pus from which was found to contain abundant gonococci. Sections of the skin taken from the margins of the abscess showed the presence of gonococci in many of the polynuclear leucocytes; sections from the erythematous patch on the knee showed a polynuclear infiltration around the blood-vessels. Audry suggests that many dubious forms of Erythema multiforme are due to an unsuspected gonorrhœal infection. E. G. L.

RECURRENT HERPES OF THE BUTTOCK. Dubreuilh. (*Ann. de Derm. et de Syph.*, November, 1905, p. 847.)

Recurrent herpes, common on the lips and the genitals, and of the type usually known in this country as febrile herpes, appears to be very uncommon on other parts of the body. Less than a dozen cases apparently rest on record with a distribution on the cheek, and its appearance on the buttock seems nearly as uncommon. Dubreuilh has collected in all eight cases, beginning with the initial observation of Bertholle in 1876, and including three hitherto unpublished cases. Prodromal neuralgia was noticed in three cases, and in all the cases the patients could be styled "nervous arthritics," with personal or hereditary history of migraine and gouty inheritance. In two cases distinctly mental symptoms were noted. The eruption always appeared at each recurrence in the same position and unilaterally. The eruption produced by antipyrine resembles that of recurrent herpes most closely, and the absence of such medication should be ascertained before a diagnosis is made.

No treatment has been found to exercise much impression on the tendency to have these attacks. Gouty conditions should be treated when present.

E. G. L.

QUARTERLY SURVEY OF DERMATOLOGICAL LITERATURE.

HYPERÆMIAS, INFLAMMATIONS, ETC.

Abscesses, Multiple, in Sucklings. F. Lewandowsky. (*Archiv f. Derm. u. Syph.*, June, 1906, p. 179.)

Angio-neurotic Œdema, A Case of. Claude Tetman. (*Lancet*, June 2nd, 1906, p. 1585.)

Chilblain, Histological Study of Three Cases of. Menahem Hodara. (*Monats. f. prakt. Derm.*, May 1st, 1906, p. 450.)

Eczema. The Etiology of, with Special Reference to the Recent Literature on the Subject. J. M. H. MacLeod. (*Practitioner*, July, 1906, p. 98.)

Caterpillar Rash. J. C. Thresh. (*Lancet*, August 4th, 1906, p. 291.)

Dermatitis Exfoliativa Neonatorum and Pemphigus Acutus Neonatorum, On the Connection between. E. Heidinger. (*Archiv f. Derm. u. Syph.*, July, 1906, p. 349.)

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Pemphigus Vegetans. A. Ravogli. (*Journ. of Cut. Dis.*, July, 1906, p. 311.)

Pemphigus, Condition of the Marrow in. (*Giorn. Ital. d. Mal. Ven. e della Pelle*, 1900, fasc. ii, p. 217.)

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Sclerema Neonatorum occurring in Twins. A Note on Two Cases of. B. Addenbrooke. (*Lancet*, August 4th, 1906, p. 296.)

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Urticaria Pigmentosa. TOYAMA. (*Japan Zeitschr. f. Derm. u. Urol.*, February, 1906, p. 4.)

Urticaria Pigmentosa. WALLACE BEATTY. (*Dublin Journ. Med. Sci.*, June, 1906.)

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Leprosy, On the Pathology and Therapy of. P. G. UNNA. (*Monats. f. prakt. Derm.*, June 15th, 1906, p. 603.)

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General Paralysis and Syphilis among the Arabs. MARIE. (*La Syphilis*, January, 1906.)

Generalised Tertiary Cerebral Arteritis. BARTHÉLEMY. (*La Syphilis*, February, 1906.)

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THE OPSONIC TREATMENT OF CERTAIN DISEASES OF THE SKIN.

By GEORGE PERNET and J. LEMARE BUNCH.

In the following pages will be found details of several cases attending the skin-department of University College Hospital, in which the opsonic treatment has been employed, viz. three cases of Lupus vulgaris, one case of localised bullous eruption, one of Acne vulgaris, and one of severe erythema. All the patients attended as out-patients. These cases have been selected because for the most part they have been under treatment for long periods.

Lupus vulgaris.

Case 1.—Albert M—, aged 17 years (No. 432, 1905). The patient first came under observation on May 19th, 1905, for multiple Lupus vulgaris, which had started ten years previously, as a result of measles apparently, although he was not certain about this point. He had already been treated for some five years at a special skin-hospital in London, with little improvement. There were some twenty patches in all scattered about the neck and limbs. In addition, there were some patches of recent closely aggregated follicular tuberculides. One patch was on the chest, between the left nipple and the sternum; it was circular, and about 2½ inches in diameter, being made up of minute, pale red, follicular papules. There was a similar but smaller patch over the right breast.

Injections of T.R. were commenced on May 18th, the first in the forearm, later in the neighbourhood of the large patch of tuberculides. After three injections this patch became slightly paler. By July 28th it had become much paler, showing a faint yellow tinge and no trace of the follicular affection. It had quite disappeared by September 19th, leaving only a faint pinkish discoloration behind.

Injections were continued about a patch of Lupus vulgaris on the right forearm, with resulting improvement and involution.

A large patch of Lupus vulgaris under the right jaw was then dealt with by local T.R. injections, with some flattening of the lesion, accompanied by paling of the colour. Local fomentations were of some assistance, although they were not apparently carried out with perseverance.

The patient had so many lupus patches—twenty-three—some of them as much as 2—2½ inches in diameter, that it was not easy to find a conveniently accessible site for the injections which should be at a considerable distance from a lupus lesion. Although there was no reason to think that those lesions nearest the point of injection would be likely to benefit from the injections of tuberculin more than those at a distance, it was found as a fact that a very considerable difference did show itself. Thus the first injection of $\frac{1}{800}$ mgm. tuberculin was given beneath the skin of the forearm and produced no general or local reaction. The second injection was given eleven days afterwards beneath the skin of the chest, not far from two somewhat recent papular tuberculides, one of which measured 2½ inches in diameter. When seen three weeks afterwards the larger patch appeared paler, but the lupus patches elsewhere were little, if at all, affected. Another injection of $\frac{1}{400}$ mgm. was given beneath the skin of the chest, and another of $\frac{1}{800}$ mgm. a week later in the same region. The effects of these injections appeared to be chiefly local, and their favourable results were so well marked that the two patches of papular tuberculides gradually involuted, becoming first paler and less prominent, and finally disappearing, so that after the holidays on September 19th no trace of them was left, although the lupus patches elsewhere at a greater distance from the point of inoculation showed but little improvement. Having got rid of these lesions on the chest, it was decided to continue the injections near a patch on the forearm, which

was easily accessible, in order to decide whether or not that patch would improve more rapidly than those at a distance. During these injections no operative procedures of any kind were adopted, and the patient was only given a mixture containing Saccharum ustum.

The doses of tuberculin were at first increased without producing any general reaction, the patient continuing his work all the time without taking any holiday. By the end of the year the patch of lupus on the forearm had become paler, smaller, less prominent, and less indurated, and by March had still further greatly improved, although no injection was given near it for two months from December 15th. By this time the amount of tuberculin injected had been decreased again until only $\frac{1}{1200}$ mgm. was given as a dose, and with this dose the opsonic index kept up well. The patches of lupus at a distance from the point of inoculation showed much less improvement, and in order to determine whether in this patient the injections produced a certain local action it was decided to inject near a large, obstinate, and disfiguring patch on the side of the neck and jaw. These injections were continued over a period of some months, and the lesion improved; but the patient's general health, never very robust, suffered somewhat from his too close attention to his work or the long hours and absence of holiday, and his general power of resistance to any infection could not at this time have been very high. Fomentations were applied as well as he could manage them, but perhaps not quite as effectually as was desired. The lesions were dry and scaly, so there seemed no great object in giving him staphylococcus injections, and the only one which was given but slightly affected his opsonic index for staphylococci and produced no change in the clinical appearance of the lesions. The patient since commencing treatment has shown no signs of developing any fresh lesions, nor have any of those already present increased in size, induration, or prominence to the slightest degree. The change which has taken place has been entirely in the direction of improvement. He is still under treatment.

The chart of the case showed clearly that the patient's opsonic index remained low as long as relatively large (although absolutely very small) doses of tuberculin were administered, and only reached normal when doses of only $\frac{1}{1200}$ mgm. were substituted.

(To be continued.)

"GRANULOSIS RUBRA NASI" (JADASSOHN). A FURTHER CONTRIBUTION.

By J. M. H. MACLEOD, M.A., M.D., M.R.C.P.,
Assistant Physician for Diseases of the Skin, Charing Cross Hospital; Physician to the Skin-Department, Victoria Hospital for Children.

In March, 1903, I presented at the Dermatological Society of London a case of the rare affection of the skin of the nose designated by Jadassohn "Granulosis rubra nasi," and subsequently described the case in detail in a contribution on the subject in the June issue of the *British Journal of Dermatology* of that year. The case was of special interest, as it was the first one to be recognised and exhibited to the Society as an example of Granulosis rubra nasi. As I have had the opportunity of keeping it under observation since it was exhibited, and have recently had a second case in my clinic at the Victoria Hospital for Children, it may be of interest (1) to bring my original contribution up-to-date by referring to the course of the disease since the patient first came under my care, (2) to briefly describe the cases which have been recorded since then, and (3) to give a short general account of the disease on the cases which I have had the opportunity of observing, and based on the literature on the subject.

(1) Course of the Previously reported Case. Richard W—. (*Brit. Journ. of Derm.*, 1903, xv, p. 197.)

The boy is now nine years of age, and though healthier-looking than when he first came under observation he might still be described as delicate. In spite of both the general and local treatment to which he has been subjected more or less continuously during the last three years the localised hyperidrosis of the nose has still persisted. The red micro-papules, which were once so marked a feature of the case as to have suggested the diagnosis of Lupus vulgaris, have diminished in number, and have disappeared from his upper lip, and those which are left have become flattened. The affected area, which includes the skin of the whole of the cartilaginous part of the nose, still presents diffuse erythema, and is moist and dotted over with beads of perspiration. Within the last year a new feature has been

added to the case through the development of marked hyperidrosis of the palms and soles. Formerly, though his hands were slightly cyanosed, giving evidence of a weak peripheral circulation, the hyperidrosis was slight. When he was shown at the Dermatological Society of London for the second time in July, 1906, the palms of the hands were red, glossy, and moist, and there was obvious hyperkeratosis. Two years ago it was noticed that his teeth were defective and peg-shaped, and on this account he was sent to have an impression taken of his mouth. As a result of taking the impression of his gums the most acute attack of hyperidrosis of the nose which the boy had experienced was set up, presumably by the reflex irritation. Previous to this the affected area had been tending to become quiescent, but on the day after the cast was made the nose became inflamed, swollen, and covered with large beads of perspiration, and the skin assumed the sodden, macerated appearance which occurs in marked hyperidrosis elsewhere. With mild antiseptic lotions and pastes the skin returned to its normal state in about ten days.

The treatment which has been adopted since the boy was first exhibited has been on general principles to try and improve his general health, by tonics, cod-liver oil, etc. Locally the liniment of belladonna was painted on the nose daily for about a month with no distinct benefit; various drying pastes, containing zinc oxide, tannic acid, and salicylic acid have been prescribed, but only with temporary benefit, for no sooner were they discontinued than the hyperidrosis returned, consequently during the last year local treatment has been almost entirely given up.

(2) Author's Second Case.

James B—, aged 9 years, came to the Victoria Hospital in May, 1906, suffering from Granulosis rubra nasi. The patient was a thin, delicate-looking boy, with a marked dolichocephalic head. He had a weak peripheral circulation, and his hands were cyanosed and moist, but there was no hyperidrosis of his feet. The skin of the nose, extending from the tip to the bridge and laterally to the junction of the alæ nasi and the cheeks, was bluish-red in tinge. It was cold and moist to the touch, and covered with small beads of perspiration. The redness was diffuse and faded above into the colour of the neighbouring skin. Here and there over it a number

of small telangiectases were detected. A few red micro-papules were present at the orifices of the sweat-ducts, but the "granulation" was not a marked feature of the case. The upper lip near the middle line was also affected, was moist, and showed a number of sweat-pearls. The disease had begun insidiously at the age of five years, and had persisted with little alteration since that time. The boy's mother died of tuberculosis. He had three brothers and three sisters, but in none of them was the nose affected.

He was ordered to have cod-liver oil, and to apply a zinc paste to the nose, but no definite benefit to the local lesion had so far resulted from the treatment.

Abstracts of Cases recorded since 1902.

(1) *Saalfield's Case in a Girl, aged 8 years.*

The case was shown at the Berliner Dermatologische Gesellschaft in December, 1902. The lesions were typical of the disease, and the patient had suffered from it since she was two years of age.—*Monatsh. f. prakt. Derm.*, 1903, xxxvi, p. 28.

(2) *Audry's Case in a Boy aged 7 years.*

The patient was healthy otherwise, and the nose had first become affected when the boy was four years old. The redness was confined to the cartilaginous portion of the nose and was most marked near the nostrils. The red area was dotted over with numerous small punctiform papules, which were deep red in colour and had the appearance of pseudo-vesicles. There were also numbers of small beads of perspiration. Similar lesions were present on the upper lip and in the canine fossæ. The mother said that the redness and hyperidrosis were constantly present, and that neither the cold of winter nor the heat of summer seemed to exert any influence on them. There were no subjective symptoms. Audry described the case under the heading of "False Acne Rosacea in Children."—*Ann. de Derm. et de Syph.*, 1903, iv, p. 844.

(3) and (4) *Lebet's Cases in a Girl, aged 14 years, and her Mother.*

Lebet, in "A Contribution to the Study of Hydrocystoma," gives an interesting note on Granulosis rubra nasi and describes two cases.

The patient was a young girl, aged 14 years, whose cousin, a daughter of her mother's sister, was similarly affected. The disease of the nose had made its appearance gradually three years before, the skin of the nose being constantly moist, the moistness varying according to the time of the year, being more pronounced in winter than in summer. The patient was poorly developed for her

age, but intelligent. The skin of the cartilaginous portion of the nose was red owing to the presence of numerous small papules, varying in size from a pin's point to a pin's head, some of which were acuminate and others flat. The lesions were bright red in colour and soft to the touch, and were situated on an erythematous base. Here and there in the alæ nasi between the papules, a few telangiectases could be seen. The tip of the nose was humid to the touch, and small drops of acid sweat could be expressed. On pressure with a diascope the skin became white, except where freckles were present. The treatment adopted consisted of bathing the nose with very hot water, dusting on tannoform powder during the day, and the application of a sulphur-resorcin lotion at night. Under this treatment the condition improved rapidly and seemed to be almost healed in about six weeks, but when the patient next came under observation, six months later, the affection had recurred and the hyperidrosis was abundant.

The mother of the patient was a youngish, healthy woman who had always noted a tendency of her nose to perspire, but had never observed any marked redness there. Still, the skin of the median part of the cartilaginous portion was somewhat atrophied, pinkish and slightly humid, and beads of perspiration could be expressed by pressure as in the daughter's case. The chief point of interest in this case was the presence on the red area of five vesicular lesions about the size of pin-heads. Two of these vesicles were dried up and no fluid oozed out on puncturing them; the other three were full of fluid, were transparent, bluish in colour, situated beneath the epidermis, and when punctured gave out a drop of clear fluid with an acid reaction. These lesions were "hydrocystomata." Lebet considered that the occasional presence of hydrocystomata in Granulosis rubra nasi was suggestive that the inflammatory infiltrations round the sweat-ducts pressed on or caused an actual obliteration of the duct and so led to the formation of retention cysts.—*Ann. de Derm. et de Syph.*, 1903, iv, p. 273.

(5) *Dubreuilh's Case in a Girl aged 9 years.*

Professor Dubreuilh has described a case which occurred in his clinic in Bordeaux. The patient was a girl aged 9 years, who had suffered from the disease for four years. The cartilaginous part of the nose was affected and constantly red, but the redness increased, becoming violaceous in tint, under the influence of cold in winter. The red patch was clearly demarcated, but was not infiltrated. On this red area there were a number of rounded red papules about the size of pin-heads, and it was dotted over with beads of perspiration, while the rest of the face was dry. On examination with a lens it was found that the redness was due to the presence of small islands of vascular dilatation, which were indistinguishable with the naked eye. The red skin had also a granular appearance owing to small, red, acuminate elevations at the sweat-orifices, and these were surmounted by beads of perspiration. Since the disease had commenced it had never retroceded. There were no subjective symptoms associated with it and the sensation of the nose was normal. The general health of the child was imperfect. She suffered greatly from boils. She had bad teeth, and up to the age of seven had incontinence of urine. The case was described under the title of "A form of Chronic Erythema of the Nose in Children."—*Journ. de méd. de Bordeaux*, 1903.

(6) *Marcel Sée's Case in a Boy aged 5 years.*

At the meeting of the Société Française de Dermatologie et de Syphilis, in November, 1904, Marcel Sée showed a case. The patient was a little boy, aged 5 years, who had suffered from the affection for a year. His nose at the tip and ala was reddened, without infiltration or telangiectases. On the red surface were numerous small elevations, which were deep red in tint; associated with this was the presence of marked hyperidrosis and of numerous beads of perspiration. The condition had persisted unchanged since it first appeared, except that it became more marked under the influence of heat and cold. The affection was most resistant to treatment.—*Ann. de Derm. et de Syph.*, 1904, vol. v, p. 1037.

(7) *Pick's Case in a Boy aged 14 years.*

At the Wiener Dermatologische Gesellschaft, in May, 1904, Pick showed a case in a young boy aged 14 years. The boy had suffered from the affection since he was five years of age. The skin of the cartilaginous portion of the nose was red and dotted over with small papules, which disappeared under pressure with a diascope. Associated with the redness there was constant hyperidrosis, which made its appearance as soon as the sweat was dried up. The mother of the patient also suffered from Hyperidrosis nasi.—*Archiv f. Derm. u. Syph.*, 1904, vol. lxxii, p. 275.

(8) *Pinkus' Case in an Adult Male aged 59 years.*

Pinkus, of Berlin, described an unusual case in an adult, who had suffered from erythema and hyperidrosis of the nose since childhood. When he came under observation the skin of the cartilaginous portion of the nose was bluish-red in tint, moist, and dotted over with sweat-beads. There were no subjective symptoms associated with the lesions on the nose, and, except for the disfigurement connected with it, the affection did not in any way inconvenience the patient. The patient also suffered from a weak peripheral circulation and had cold, cyanosed hands and feet. Pinkus, in this contribution, supported the theory that Granulosis rubra nasi preceded and caused the formation of hydrocystoma. For several years red macules and papules had developed in the erythematous base. The micro-papules were about the size of a pin's head, had a red cystic centre, and were surrounded by a dark telangiectatic ring. Between these small lesions there were a few larger bluish cysts like hydrocystomata, which came and went every few days, refilling soon after they emptied themselves. He considered that the chronic inflammatory process localised about the sweat-duct led to a closure of the duct and the consequent formation of a retention sweat-cyst, and that this, when emptied, kept on filling again from the secretion of the sweat-coil.—*Derm. Zeitschr.*, 1904, vol. xi, p. 642. Abstract by Whitfield, *Brit. Journ. Derm.*, 1905, vol. xvii, p. 71.

(9) *Bäumer's Case in a Boy.*

In July, 1903, Bäumer exhibited a case at the Berliner Dermatologische Gesellschaft in a boy who had suffered from the disease for six or seven years. The histology of this case he has described in detail. The principal microscopical

changes were located in the superficial portion of the corium around the sweat-duct, and consisted of a dense infiltration, composed chiefly of plasma-cells, with a few mononuclear and polynuclear leucocytes. The duct was widened in its whole course, and here and there filled with a finely granular mass. In the midst of the cellular infiltration the elastin had disappeared, while beyond it it was unaltered. Both the blood-capillaries and lymph-spaces of the upper portions of the corium were widened. In contra-distinction to what occurred about the sweat-glands, there were no cellular deposits connected with the pilo-sebaceous follicles.—*Derm. Zeitschr.*, vol. xi, p. 640. Abstract by Whitfield, *Brit. Journ. Derm.*, 1905, vol. xvii, p. 71.

(10) *Ormsby's Case in a Boy aged 8 years.*

At a meeting of the Chicago Dermatological Society, in 1905, Dr. Ormsby exhibited a case of Granulosis rubra nasi. The patient was a delicate and anæmic boy, who had suffered from the affection for one year. The area involved was limited to the nose, covering the tip and extending over either side, being more marked on the right and stretching upwards towards the bridge. The lesions consisted of small, translucent, and brownish-red papules, situated on an erythematous base, the degree of erythema varying from time to time. Large beads of sweat were constantly present in the affected area. There were no subjective symptoms.—*Journ. Cut. Dis.*, 1905, vol. xxiii, p. 183.

(11) *Jamieson's Case in a Boy aged 9 years.*

At the meeting of the Edinburgh Medical Society, in July, 1905, Dr. Allan Jamieson exhibited a case of Granulosis rubra nasi. The patient was a fairly healthy boy, aged 9 years, but with a feeble peripheral circulation, as shown by his hands and feet readily becoming cold in winter. With the exception of slight catarrhal jaundice three years before he had had no severe illness. Two and a half years before he was exhibited his mother noticed that the lower half of the nose was distinctly reddened, and that beads of sweat poured from it, especially at meal-times. Since that time there had been no change. The redness was made up of fine punctiform elevations, imparting a somewhat granular aspect, and droplets of perspiration studded the part. There were no subjective symptoms. On the right side of the nose near the root there was a small spider nævus.

(12 *and* 13) *Malherbe's Two Cases—in a Boy aged 7 years and a Girl aged 9 years.*

(1) The patient was a delicate boy of fair, lymphatic type, aged from 6 to 8 years. For some years the parents had noticed a tendency to reddening at the end of the nose under conditions of emotion after food, or when the child stayed in a warm place. The redness was accompanied by large pearly drops of sweat. When the child first came under observation, in 1898, there were very small flat elevations of a vivid red colour seated upon a rose-coloured base. Large beads of sweat appeared as a result of emotion from examination. There was no feeling of change in the consistency of the skin, and palpation caused no pain. The writer was at a loss to name this singular lesion, which he had then met for the first time. Treatment by tonics, cod-liver oil and ichthyol locally produced con-

siderable amelioration at first, but later no improvement. Then, considering the possibility of Lupus erythematosus, quadrillated linear scarification was employed at weekly intervals with successful results. In three months the patient was quite freed from the inconvenient affection.

(2) "The second case was that of a little girl, aged 9 years, also very fair and lymphatic. She presented an eruption localised to the end of the nose and identical with that of the boy. This case was seen in 1902, when the affection had been described under the name of Granulosis rubra nasi, and a definite diagnosis was made at once. The experience gained in the treatment of the previous case induced Malherbe to employ in this new case the method of quadrillate scarification, and here also the result was rapid and good."—*Journ. des Mal. Cut. et Syph.*, 1905, vol. xvii, p. 97. Quoted from abstract by Adamson, *Brit. Journ. of Derm.*, 1906, vol. xviii, p. 46.

(14) *Graham Little's Case in a Boy aged 12 years.*

At the meeting of the Dermatological Society of London in May, 1906, Dr. E. Graham Little showed a case of Granulosis rubra nasi in a lad aged 12 years. The affection involved the cartilaginous portion of the nose and the median depression of the upper lip just below the nose. The skin in this region presented a general redness and "upon close examination many tiny drops of pellucid sweat could be seen upon the reddened area. The drops of sweat very soon formed again, even when carefully wiped dry with a handkerchief." Associated with this there was a finely granular eruption only visible with a lens. The duration of the affection was not ascertained. The patient seemed to be otherwise healthy.—*Brit. Journ. of Derm.*, 1906, vol. xviii, p. 218.

(15) *Colcott Fox's Case in a Boy aged 9 years.*

Dr. Colcott Fox has described a case in the last issue of the *British Journal of Dermatology*, which was the first case he had noted in his large experience of skin-diseases in children. The patient was a well-built, healthy-looking boy aged 9 years, who had suffered from an affection of his nose for several months. "On the end of his nose there was a small crust surrounded by a number of isolated red, semi-translucent, rather deep-seated, slightly projecting nodules the size of a pin's head." At first sight the lesion had suggested Lupus vulgaris, but on further examination later a number of small vesicles were observed on the affected area of the nature of hydrocystomata. The case was very resistant to treatment, and when the cysts disappeared the original nodules persisted. Free sweating of the end of the nose was noted on several occasions.—*Brit. Journ. of Derm.*, 1906, vol. xviii, p. 320.

(3) General Description of the Disease.

Since Luithlen first drew attention to this peculiar affection in 1900, and Jadassohn in the following year gave it the name under which it is now generally known, a considerable number of cases have been reported from the various dermatological clinics, and doubtless

others have been recognised without having been published. On looking over the literature on the subject I have found records of thirty-two definite cases and two doubtful ones. These cases have shown such a marked unanimity with regard to their clinical characteristics that there did not seem to be any point in describing them in further detail in this contribution. The reports of them were all more or less a repetition and amplification of Jadassohn's description. But as certain points connected with the disease have been brought out since 1901, it may be of some value to attempt to crystallise the various observations into a connected description of the disease.

Definition.—"Granulosis rubra nasi" is a peculiar affection of the nose of children, characterised by persistent hyperidrosis of the skin of the cartilaginous portion, associated with diffuse redness and the presence of inflammatory micro-papules at the sweat-orifices.

Nomenclature.—Cases have been described under the following headings: Hydrocystoma (Pringle); A peculiar form of acne with changes in the sweat-glands (Luithlen); Granulosis rubra nasi, Perisyringitis chronica nasi, Dermatitis micro-papulosa erythematosa hyperidrotica nasi (Jadassohn); A peculiar inflammatory dermatitis of the nose of young individuals with sweating (Herrmann); False acne rosacea of children (Audry); A form of chronic erythema of the nose in children (Dubreuilh).

Symptoms.—The disease generally affects the skin of the cartilaginous portion of the nose, spreading out laterally over the alæ nasi and extending in front from the tip to the bridge. The column and the edges of the nostrils are as a rule exempt. It may spread out on to the skin of the cheeks, over the canine fossæ, and on to the upper lip. It never attacks the mucous membrane of the nose. The skin in the affected area is more or less red. This redness is diffuse, and is usually clearly limited at the sides, while it fades gradually into the normal skin above. It is variable in intensity, sometimes being pale pink, at other times rose red, and occasionally it is purplish and livid. With the lens, and sometimes by the naked eye, a few small telangiectases may be detected on it. Now and then the skin has a glossy, atrophic appearance, like the skin in some cases of hyperidrosis palmæ.

The nose, in spite of being red, is generally cold to the touch and moist from the presence of hyperidrosis. Small beads of clear sweat

can usually be detected at the sweat-orifices and this sweat has sometimes an alkaline reaction (Pick, MacLeod). In addition to the pearls of sweat the skin is studded with macules and micro-papules irregularly distributed over it. These are reddish-brown in colour, and disappear under the pressure of a diascope. They are rounded or acuminate in shape, and are frequently situated at the sweat-orifice, and have a small sweat-pearl on their summit. It is the presence of the deep red tinted micro-papules, which have been on several occasions mistaken for small foci of Lupus vulgaris, which gives to the tip of the nose the characteristic granular appearance.

In some cases small vesicles can be detected; occasionally these are as large as a pin's head, are clear or bluish in colour, and on being punctured a drop of clear fluid oozes out. The large vesicles are indistinguishable from those of "Hydrocystoma," and have only been noted in a few of the cases (Pinkus). Deep-seated pseudo-vesicles may also be detected which are more or less dried up, and present a small scale on the surface.

Subjective symptoms are as a rule absent; in the author's first case there was slight itching, and a feeling of coldness has been noticed.

NOTE.—Illustration of the affection may be found in the description of the author's first case (*Brit. Journ. Derm.*, 1903, xv, p. 197) and of Dr. Colcott Fox's case (*ibid.*, 1906, xviii, p. 320).

The nasal condition is frequently associated with evidences of a weak peripheral circulation, such as chilblains, congested and clammy hands and feet, and occasionally marked hyperidrosis of the palms and soles.

The disease begins insidiously in early life, and when once established persists more or less uninfluenced by treatment, heat and cold, etc., till puberty, when it as a rule gradually disappears. Recently cases have been reported where traces of it were detected in adult life (Pinkus, Lebet).

PATHOLOGICAL ANATOMY.

The histology of the affection has now been worked out by various observers. The epidermis is slightly, if at all, altered. It may be thickened, or there may be parakeratosis near the sweat-orifices. It is in the corium that the essential lesion of the disease exists. There the superficial blood-capillaries are dilated, and

around them there is a slight cellular infiltration. A similar infiltration is also present around the sweat-ducts; it is these deposits of cells which give rise to the micro-papules. The infiltration consists of polynuclear leucocytes and fibroblasts, but a few plasma-cells and mast-cells may be present. Above the infiltration the interepithelial lymphatics may be dilated, and a few leucocytes may be detected between the prickle-cells. Where the infiltration is most dense giant-cells and a caseating degeneration have been noted by Jadassohn, but this, so far as I am aware, has not been noted by any other observer. The fibrous elements of the corium are not involved, and the pilo-sebaceous follicles are normal. Beneath the infiltration the sweat-duct may be dilated, and if the infiltration is marked and fibromatosis has occurred the duct may be pressed on and even obliterated, and retention sweat-cysts formed; hence the presence of the hydrocystoma lesions in association with Granulosis rubra nasi (Lebet, Pinkus). These observers consider that hydrocystoma is brought about in this way, and in corroboration of their view it has been pointed out that it is generally if not invariably preceded by hyperidrosis.

Etiology.

Age.—Granulosis rubra nasi is essentially a disease of children. It may begin very early; in my first case the mother noted it at six months. It is said to disappear in adult life (Jadassohn), and the oldest case he observed was in a girl of 16 years. In the case recorded by Pinkus, however, the Granulosis rubra nasi which began in childhood was present at the age of fifty-nine, and was then associated with "hydrocystoma," and Lebet has reported a somewhat analogous case in an adult. These are the only cases on record so far in which the condition has been noted in an adult. Still, this point is one upon which further observation is required.

Sex does not seem to play an important part in the etiology, for out of thirty cases seventeen occurred in boys and thirteen in girls.

Heredity.—The records of the cases are not sufficiently detailed to furnish reliable information on this point, as in many of the cases reported no reference is made to the parents. Various general defects have been noted in the parents, such as the presence of tuberculosis or syphilis; and doubtless a hereditary weakness is a

predisposing factor. Lebet has, however, described a case in which the mother of the girl was also affected. It has been suggested also that the disease may run in families, but with the exception of Pringle's cases, which occurred in a brother and sister, this has not been the rule.

Past personal history.—The disease usually attacks weakly children who are delicate-looking, badly nourished, and occasionally of the scrofulous type, and who generally exhibit a weak peripheral circulation, and are subject to chilblains, congested extremities, and even hyperidrosis of the palms and soles.

Season.—The temperature has a considerable influence on some of the cases. As a general rule the condition is most marked in extreme temperatures, either in very hot or very cold weather. In some cases the cold affects them most (Dubreuilh), while in others the condition persists without marked alteration in spite of change of temperature.

Pathogenesis.

The pathogenesis of the affection is still *sub judice*. It is obviously related to a weak peripheral circulation, but it is a matter for dispute whether the congested state of the blood-vessels in that part of the nose precedes the hyperidrosis, or whether the sweating is the initial disturbance, and determines the dilation and inflammatory infiltration. In my last contribution I discussed the possibility of the hyperidrosis preceding the inflammatory disturbance, and suggested the further possibility that micro-organisms flourishing more readily in the alkaline sweat might be an important factor in augmenting the inflammation. It is now generally believed that vascular troubles, consisting of a passive dilatation of the skin-capillaries, constitute the initial factor in the causation and lead to defective nutrition and hyperidrosis. Hallopeau believes it to be angio-neurosis, closely related to asphyxia of the extremities (*Ann. de Derm. et de Syph.*, 1905, vol. vi, p. 640). The inflammatory infiltration would result in turn from the hyperidrosis and possible toxins in the sweat and dilated capillaries.

Differential Diagnosis.

The affection has to be distinguished from Lupus vulgaris, Lupus erythematosus, rosacea, and Acne vulgaris. Of these probably

Lupus vulgaris may be most readily confused with it, and this has happened on several occasions. It is distinguished from Lupus vulgaris by the fact that the micro-papules disappear under the diascope, and that unless in most exceptional circumstances there is no tendency to ulcerate, and by the presence of hyperidrosis, beads of sweat, and pseudo-vesicles. From Lupus erythematosus it differs by the absence of adherent scales and atrophy. From Acne vulgaris and rosacea it is distinguished by the fact that the pilo-sebaceous follicles are not involved.

Treatment.

The treatment adopted has been largely symptomatic. The *general treatment* has been on purely general principles, with the object of improving the tone of the patient or of counteracting some obvious defect. Cod-liver oil, iron, fresh air, good food, and the like, have been freely prescribed.

With regard to *local treatment* a large variety of local applications have been tried, but as a rule with only temporary benefit. Painting with tincture of belladonna was employed daily for a month without stopping the hyperidrosis (MacLeod). Drying astringent powders and paste containing zinc oxide, tannic acid, resorcin, ichthyol, have been tried. Lebet advocates the application of very hot water, followed by the dusting on of tannoform powder during the day and the employment of a sulphur-resorcin lotion at night. Malherbe has obtained most satisfactory results by repeated quadrillate scarification of the lesion. By all these means, with the exception of scarification, temporary benefit is obtained so long as their use is continued, but a relapse usually follows their intermission. Fortunately, however, the ultimate prognosis is excellent, for in the majority of cases the affection seems to disappear spontaneously about puberty.

Note—For a detailed description of the disease see the Thesis on Granulosis rubra nasi, by Louis Ricard, Toulouse, 1904.

ON CUTANEOUS AFFECTIONS IN VARIOUS DISEASES, WITH ESPECIAL REFERENCE TO CERTAIN ANGIO-NEUROSES.*

By S. ERNEST DORE, M.A., M.D.Cantab.

(*Continued from page* 316.)

Vasomotor Disorders.

The group of diseases in which the vasomotor apparatus is more particularly at fault, and which have cutaneous phenomena as essential symptoms, may be considered in connection with the nervous system. Raynaud's disease and erythromelalgia may be regarded as forming a connecting link between the tropho-neuroses or purely nervous phenomena, and the angio-neuroses, which may be supposed to be produced indirectly through the action of a toxin upon the neuro-vascular mechanism. Erythromelalgia is found in association with many forms of organic disease of the nerve-structures, such as tabes and peripheral neuritis, myelitis, and insular sclerosis (Collier). The disease has been variously ascribed to vasomotor disturbance, central nervous disturbance, and to peripheral neuritis. A similar condition occurs in chronic arsenical poisoning. Erythromelalgia may be accompanied by hyperidrosis, also met with in arsenical poisoning.

Raynaud's disease, like erythromelalgia, has been attributed to vasomotor changes, peripheral neuritis, or to toxic substances circulating in the blood. Intermediate cases between erythromelalgia and Raynaud's disease have been recorded by Morel-Lavalle and Rolleston. According to Parkes Weber "the livid mottling observed in the chronic stage of erythromelalgia may be compared to the local asphyxia of Raynaud's phenomena, and indicates probably that there is local contraction of arterioles with engorgement of venules." He regards the early symptoms both of erythromelalgia and Raynaud's disease as best explained on the supposition of a vasomotor disturbance due to the central nervous system. Sir Thomas Barlow thinks that if the hypothesis of an unstable condition of the vasomotor centres brought about in various ways be accepted, it would seem possible to regard erythromelalgia and the

* Thesis written for M.D. Degree, Cambridge.

three clinical types of Raynaud's disease as differing from one another in the extent of the vascular storm, or the order in which spasm and paresis follow one another. In other words, the difference between the clinical phenomena of Raynaud's disease and erythromelalgia seems to depend upon the relative amount of contraction and dilatation of the arterioles and venules respectively. In the later stages of Raynaud's disease a relative vaso-constriction appears to take the place of dilatation. Various pathological changes have been described, such as thickening of the walls of the arterioles and venules, obliterative arteritis, thrombosis, etc. These processes are accompanied by interstitial fibrosis, and bring about atrophy and sclerosis or culminate in gangrene of the part. Sclerodermia and Raynaud's disease sometimes occur in the same patient, and the association of sclerodactylia with Raynaud's phenomena forms a further link between these diseases. Hardening of the cellular tissue, tense and shiny finger-ends or thickening and clubbing of the nails, vesication and œdema have occasionally been seen in erythromelalgia (Barlow).

Peripheral circulatory changes form a prominent feature in the disease known as angiokeratoma. "Its subjects are generally liable to chilblains, cold, puffy, clammy hands and feet, local asphyxias, and other evidence of disordered peripheral circulation. Vidal has shown that a condition practically identical may follow an attack of urticaria. The immediate cause is often exposure to unusual cold. Angiokeratoma is almost invariably preceded by chilblains, which subside and leave minute scattered telangiectases, over which the epidermis becomes thickened to form the warty lesions characteristic of the affection. In a small number of cases similar phenomena have been observed in the pinnæ of the ears" (Pringle).

Some of the cases are associated with lesions indistinguishable from those of Bazin's disease, a fact which has led some observers to regard the disease as tuberculous. The prevalence of tuberculous manifestations in people with a weak circulation has, indeed, given rise to the assumption that the circulatory inefficiency is itself due to a toxæmia of tuberculous origin. The circulatory incompetence, however, often precedes the tuberculous infection by many years. In a case, reported by me, of angiokeratoma with chilblain circulation, Erythema pernio, and Bazin's disease, in a girl of 18 years of age, the

fact that marked circulatory disturbance of the extremities had existed since childhood seemed to bear out the view that the circulatory incompetence may be a predisposing factor rather than a result of tuberculous infection.

According to Galloway, some of the cases classed under the title of Erythema induratum, and supposed to be tuberculous, are really due to necrosis, probably in most instances following slight injury of peculiarly weakened skin, the result of œdema or possibly of disease of the small blood-vessels. Whitfield has shown that the cases occurring in middle-aged women of poor circulation are not tuberculous, excised nodules showing no granuloma but merely a phlebitis of the small venules.

The group of so-called "winter" eruptions may be mentioned here on account of their dependence upon circulatory disturbance excited by cold, and the resemblance some of them bear to folliclis, acnitis, or other eruptions supposed to be of tuberculous origin. Many of them, however, recur in summer, and are then ascribed to the heat of the sun's rays. It is possible that the exciting factors are the actinic rays of light, which are active both in winter and summer, rather than heat rays. It is not improbable that the violet and ultra-violet rays which, as shown by Finsen, are able to cause dilatation of the small blood-vessels of long duration, also play a part in the causation of Lupus erythematosus. This disease is sometimes aggravated by exposure to sunlight, and I have seen a patch of Lupus erythematosus, corresponding in size and shape to the compressing glass, develop after the application of the Finsen rays to a small lesion of the same nature on the face within the same area.

Some other therapeutic measures, such as painting with iodine and covering the patches with plasters, etc., might have a beneficial effect by excluding the actinic rays and protecting the part from cold.

Lupus erythematosus, however, is a disease in which the so-called chilblain circulation is a pronounced feature, and lesions indistinguishable from ordinary chilblains occur on the extremities. In my experience the majority of the patients suffer from coldness of the hands and feet.

The importance of the angio-neurotic factor is shown by the frequent association of acro-asphyxia and allied conditions, the distribution of the lesions on exposed parts, and the exciting or

aggravating effect of cold. Raynaud's disease sometimes occurs in association with Lupus erythematosus. (See notes of Dr. Pringle's cases.)

The follicular localisation which is found in Lupus erythematosus and some of the tuberculides might be accounted for by the susceptibility of the follicular apparatus to cold, as is seen in the condition known as goose-skin. In Wilfrid Warde's analysis of fifteen consecutive cases of Lupus erythematosus more than half suffered at the time, or previously, from more or less persistent chilblains and five from the ulcerating type. In two coldness of the extremities was present to an unusual degree, and in three there was local syncope of the hands. One patient, who had very severe and persistent chilblains, showed marked cyanotic flushing of the face.

If it is admitted that external agents, such as cold, sunlight, etc., play an important part in the etiology of Lupus erythematosus, they are insufficient in themselves to account for all the symptoms, especially of the disseminated or exanthematic form of the disease. In the latter there is a strong presumption of the presence of a toxin, acting through the vasomotor centres. The nature of this toxin is unknown: by some it is believed to be tuberculous, others think it may arise from a variety of causes. This view has recently been upheld by Galloway and MacLeod, who described two cases, one of Lupus erythematosus associated with cirrhosis of the liver and alcoholism, which closely resembled Erythema multiforme, and another of Erythema multiforme simulating Lupus erythematosus, in a young woman who also had nephritis.

Galloway regards the cause of Lupus erythematosus as "a toxæmia, arising from various causes, just as in Erythema multiforme: in the case of Lupus erythematosus, however, there is a strong indication of a second factor besides the vasomotor disturbance produced by the toxin—viz. the tendency for easily produced paralysis of the vasomotor mechanism." Sequeira and Balean have shown that a considerable percentage of the disseminated cases have albuminuria, which they regard as toxic in origin.

If we admit that there are affinities between the discoid form of Lupus erythematosus and the acro-asphyxias, and between disseminated Lupus erythematosus and Erythema multiforme, there still

appears to be a wide gap between the Raynaud and the Erythema multiforme group. This gap, however, is not much greater than that which exists between discoid and disseminated Lupus erythematosus. It is not uncommon to meet with cases in which lesions indistinguishable from Erythema multiforme occur in association with circulatory disturbances analogous to those of Raynaud's disease. That a simple erythema associated with disorder of the circulation may go on to necrosis and gangrene has been shown by Galloway, who reported a case in a young girl in whom the slightest injury produced nodules like Erythema induratum on the shins, which in course of time necrosed and ulcerated, and in whom after ten or twelve years gangrene of the whole breast and part of the trunk on the left side occurred.

An intimate association is thought by Wilfrid Warde to exist between Lupus erythematosus and sclerodermia. He contends that "any erythema or erythematous eruption can, if the circumstances be favourable, undergo atrophy. Usually the healing is prolonged owing to the fact that the vessels of the part are merely damaged but not destroyed, and the exciting causes—*e. g.* cold, exposure to sun, etc.—are still operating. But in other cases the passage into atrophy may be so rapid and complete that the case is labelled sclerodermia or idiopathic atrophy of the skin from the beginning." He believes that Lupus erythematosus is part of a pathological chain of which sclerodermia forms the end, and concludes that "there occurs in patients who suffer from diffuse sclerodermia of the face and hands, or from Raynaud's disease, a form of atrophying erythema, marked by the preponderance of the atrophy over the erythema and by the rapidity with which the atrophy often ensues."

"These patients show a marked tendency to gangrene of the finger-ends and to the appearance on the hands, and often on the feet, of erythematous lesions, sometimes purpuric in character."

Such cases he classes provisionally as the sclerodermic type of Lupus erythematosus.

It is difficult to estimate the importance of the vasomotor disturbance in the various diseases under discussion, but it appears to be a common factor and to form a connecting link between them. The vascular derangement appears to result from the action of various vasomotor irritants, such as cold, heat, actinic rays, etc., acting

externally, or various toxins acting internally. These irritants seem to cause different degrees of vascular disturbance according to the severity and duration of their action and the susceptibility of the individual.

Cold, for instance, causes a temporary contraction, followed by dilatation of the peripheral arterioles, giving rise to ischæmia, hyperæmia, venous engorgement, and exudation, and represented clinically by "dead fingers," chilblains, or frost-bite, according to the duration and intensity of the process.

Analogous conditions are seen in the local syncope, asphyxia, and gangrene of Raynaud's disease. The vascular disturbance may stop short of producing permanent tissue changes, and the part be completely restored to the normal, but if the irritant be unduly prolonged or severe, or occur in unusually susceptible persons, the venous stasis is followed by atrophy or hypertrophy of epithelial and fibrous tissues.

It is customary to attribute both these changes to venous hyperæmia, but it is conceivable that hypertrophic changes such as occur in angiokeratoma, Erythema keratodes, etc., might be due to an intermittent constriction and dilatation of arterioles, leading to increased nutrition from repeated flushing of the part with blood.

Another possible factor is increased sweating, which is a well-known cause of hyperkeratosis, and often occurs in cyanosed extremities. Atrophic changes represent a further and more permanent state of vascular stasis, and are due to malnutrition from hypervenosity of the blood, pressure of exudation and dilated vessels or to slight injury of badly-nourished tissues. Probably it is sometimes due to an early or slight degree of cicatricial contraction.

Such changes are seen in necrotising chilblains and scar-leaving erythemata.

A further stage is reached when interstitial sclerosis with thickening of the walls of the blood-vessels and obliterative arteritis occur, these conditions being represented clinically by sclerodactylia and the later stages of Raynaud's disease.

It does not seem unreasonable to suppose that similar processes play a part in the production of Lupus erythematosus. The ordinary form, which affects the flush areas of the face and in the early stages sometimes simulates rosacea, is characterised by erythema and vaso-

dilatation—associated with increased cell-growth, and is succeeded by atrophy of the tissues.

It may be that there are grades of vascular disturbance corresponding to various clinical conditions, such as:

(1) Temporary vaso-dilatation (chilblains, local asphyxia); (2) intermittent dilatation, with hypertrophy (angiokeratoma, Erythema keratodes and allied conditions, ? early stages of Lupus erythematosus, etc.); (3) persistent dilatation, with atrophy (scar-leaving erythema, intermediate stages of Raynaud's disease, ? atrophic stage of Lupus erythematosus, etc.); (4) relative vaso-constriction (localised sclerodermia and sclerodermic type of Lupus erythematosus, sclerodactylia, later stages of Raynaud's disease, etc.).

Various internal vasomotor irritants may be supposed to have analogous effects. According to this hypothesis the first effect of temporary vaso-dilatation would be to cause Erythema simplex and urticaria.

A further stage of more permanent dilatation, resulting from intermittent or persistent action of vasomotor toxins, might give rise to Erythema multiforme, or in susceptible subjects be instrumental in causing the disseminated type of Lupus erythematosus. The last stage in which the vessels are constricted would, on the above analogy, be represented by generalised sclerodermia and allied conditions.

It is impossible to formulate the exact part played by the arterioles and venules respectively in the diseases referred to; the nervous mechanism of the veins and capillaries is at present unknown, but the former have been seen to contract in Raynaud's disease, and Steinach and Kahn claim to have demonstrated the presence of contractile cells in the walls of the capillaries which are capable of being stimulated directly or through the nervous system so as to narrow or completely obliterate the capillary lumen.

If a pretext were needed for grouping so many apparently dissimilar conditions together, it might be found in the analogy afforded by the results of toxic doses of arsenic upon the skin.

The following are some arsenical eruptions mentioned by Brooke and Leslie Roberts in their summary of the action of arsenic upon the skin as observed in the recent epidemic: Diffuse erythrodermia and scarlatiniform and morbilliform rashes, circumscribed papular and

circinate lesions, closely resembling Erythema pernio and Erythema multiforme (in some cases these observers traced the whole series of changes from small pernio-like papules near the knuckles through milky, Lichen-planus-like papules to typical arsenical warts), and more extensive discoid patches, including the erythema of the palms and soles. In connection with the latter the condition simulating erythromelalgia may be mentioned, and also the hyperidrosis and hyperkeratosis associated with warty growths on the palms and soles.

Flushing and œdema of the face and extremities, pigmentation, atrophy of the skin, herpes, and many other conditions may occur.

Arsenic is, therefore, able to produce symptoms of local as well as a general toxæmia.

The local effects may, perhaps, be determined by diminution of the vitality of the cells, brought about by external agents, such as injury or pressure, temperature changes, etc.

(Nevins Hyde and Ernest McEwen [*Trans. Amer. Derm. Assoc.*, June, 1904, p. 63] enumerate the following conditions which they regard as in part or wholly the result of unstable vascular equilibrium:

Hyperidrosis localis, dysidrosis, hydroa, pompholyx, cheiropompholyx, Keratodermia erythematosa symmetrica [Besnier], Keratodermia palmaris et plantaris, Keratosis palmaris et plantaris, Erythema keratodes, symmetrical tylosis of the palms and soles, Hyperkeratosis subungualis, subungual keratoma, onychauxis, onychogryphosis, "chronic inflammatory diseases of many fingernails," and Dystrophia unguium.)

The following five cases, four of whom have been under my personal observation and treatment, illustrate the association of peripheral circulatory disturbance with Bazin's disease and Erythema multiforme, and of Lupus erythematosus with sclerodermia and Raynaud's disease. I am indebted to Mr. Malcolm Morris for permission to publish the first three cases, and to Dr. Pringle for giving me notes of the others, and I wish here to express my thanks for their kindness.

CASE OF BAZIN'S DISEASE WITH PERIPHERAL CIRCULATORY DISTURBANCE.

The patient is a woman, aged 30 years. Her general health has always been good, and there is no history of phthisis in the family. The disease began when she was eighteen years of age, after a journey home from a school in Germany in very cold weather. About the same time she heard of the death of her mother. The first thing noticed was a blue spot on the back of the hand; in the following winter blue patches came on the feet. About five years ago an ulcer developed on the leg. Now there are numerous superficial ulcers on the extensor surfaces of the legs as far as the knees. Where the skin is not ulcerated it is scaly,

thickened, and deeply pigmented. For thirteen years she has suffered with "feeble circulation" of the hands and feet, which are always cold and frequently become blue. At the present time the ring-finger of the left hand is blue and "dead." There is considerable mottling of the legs and arms, with poor blood-return after pressure.

Case of Local Asphyxia, with Lesions like Erythema Multiforme in a Young Woman, aged 23 years.

Her general health is fairly good and there is no history of phthisis in the family. She used to have a good circulation, and complained of a feeling of heat rather than cold, but after a shock, consequent upon the death of her sister from typhoid fever seven years ago, she suddenly began to suffer from coldness and blueness of the extremities. The skin of both her hands is œdematous and of a mottled purple and red colour, and there are numerous circular, raised patches similar to those of Erythema multiforme. Sometimes the patches are ringed and spread at the edge like Lupus erythematosus, and frequently there is vesication and ulceration of the skin. Last year she suffered in this way from October to May. The condition disappears in the summer, but returns every winter.

Case of "Sclerodermic" Lupus Erythematosus in a Young Woman, aged 24 years.

Nothing of special importance in her family history. Her general health has been fairly good, but two years ago she was laid up with hæmorrhage from the stomach. Her present disease began four or five years ago on the right side of her nose. The whole of the skin of the nose is tense, shiny, and atrophic. There are large patches on each side of the cheek, consisting of extensively scarred and pigmented skin. At the edges of the patches on the cheeks the skin is hard and infiltrated, and the same induration of the skin is noticed in several isolated patches. Both ears are affected and their lobes destroyed. There are three or four small patches on the scalp in the frontal and parietal regions.

The patches are smooth and shiny and devoid of hair, and show no signs of inflammation. The hands have been affected in the winter, but are now free. She attributes the disease to exposure to strong winds. At the present time there is some reddening of the patches on the cheeks, but nothing that can be definitely diagnosed as Lupus erythematosus. The distribution and atrophy suggest this disease, while the marked thickening and hardening of the skin closely resemble that of sclerodermia. A definite history of the onset of the disease cannot be obtained from the patient, but it seems probable that this is an example of a case of Lupus erythematosus going on to sclerodermia.

Cases of Lupus Erythematosus Associated with Raynaud's Disease.

(*a*) Mrs. X—, aged 44 years. An extremely neurotic lady. Ten years ago suffered from an attack called "gout," but her description does not tally with that disease. She was sent to reside at Bournemouth eight years ago, when the diagnosis of Raynaud's disease was established. The history is clear as to the occurrence of paroxysmal attacks of asphyxia of the hands and of local syncope of the feet, but there is nothing indicating hæmoglobinuria. She had also attacks

of paroxysmal colic and heart-failure of apparently extreme intensity. She was sent to Harrogate for so-called gout in 1901, but her condition was extremely aggravated by the cold of that locality, to which she is peculiarly susceptible. She now (1904) presents the typical atrophied and stumpy finger-ends of Raynaud's disease, with some degree of sclerodactylia, and commencing ulceration over the joints of the phalanges. Her toes and feet are hard and waxy. Her skin-condition developed as a patch over the left malar prominence five years ago, which was called "gouty psoriasis." Six months ago she was ordered to Switzerland, and during her stay there in extremely cold weather her skin-condition had become greatly aggravated. This may partly be due, however, to the fact that under so-called "homœopathic guidance" the application of the preparation applied to her lesions had been pure oil of cade. She now presents quite typical lesions of Lupus erythematosus of acutely inflammatory type, situated symmetrically in the zygomatic and retro-aural regions, as well as inside the conchæ of both ears, the pinnæ being also seared. Her scalp, from the frontal region to the vertex, is cicatricial and denuded of hair. The face is also studded with innumerable erythematous and slightly scaly lesions from the size of a split-pea to a finger-nail.

Case of Raynaud's Disease and Scleroderma of the Face, the latter apparently beginning with the Clinical Symptoms of Lupus Erythematosus.

[The notes are taken from the *British Journal of Dermatology*, 1894, vol. vi. The case was shown by Dr. Pringle, at a meeting of the Dermatological Society of London, on October 10th, 1894.]

(*b*) The patient was a girl aged 23 years. She enjoyed fairly good health until the winter of 1891, when she was admitted to the Middlesex Hospital for typical Raynaud's disease, affecting the hands and resulting in gangrene of the tips of several fingers. She had similar attacks in the winters of 1892 and 1893, but was said to have recovered perfectly in the summers of those years. During the past summer the condition had, however, been permanent. In the early spring of 1892 she attended in the skin-department of the Middlesex Hospital for Lupus erythematosus—of "bat's-wing" distribution, accurately symmetrical, of superficial type, with very little infiltration but clearly-defined edge. This rapidly subsided under treatment, leaving the skin only slightly thinned with patulous sebaceous-gland orifices. The ears, however, were permanently and considerably scarred. The hands now exhibited a characteristic example of sclerodactylia, the fingers being flexed in semi-flexion, and the skin pale, cold, shrunken, and tightly stretched. This condition of skin extends to a hand's-breadth above the wrist on both sides. The feet, when exposed, become very cold and blue, but the nutrition of the skin there is unaltered. In July, 1894, she began to notice a feeling of tightness in the skin of the face, which is now distinctly sclerodermatous all over, most markedly so over the angles and rami of the jaws, and over the forehead. The skin of both cheeks presents several white "ivory patches" of morphœa, similar patches being, on close examination, detected on the hands.

She was again exhibited by Dr. Pringle on July 8th, 1896. There was at this time commencing gangrene of all the finger-tips and over the knuckles, while

she also suffered from the paroxysmal phenomena of Raynaud's disease, but without hæmoglobinuria.

A special point of interest was that the sclerodermic condition of the face had been preceded by a "bat's-wing" patch of two years' duration, diagnosed by the exhibitor as erythematous lupus, which only slowly assumed its present characteristically sclerodermic appearance and attributes.

(*To be continued.*)

CASE OF DERMATITIS REPENS.

By F. E. MEADE, M.R.C.S., L.R.C.P., and W. T. FREEMAN, M.D., F.R.C.S.

Annie F—, aged 22 years. Upon March 9th, 1906, she complained that the day before, whilst in the garden, an insect had bitten her wrist, and that it was getting very painful.

She was a well-developed girl, somewhat anæmic, and of nervous temperament. Her only troubles seemed to be constipation and occasional facial neuralgia.

Upon examination there was a small pustule on the anterior surface of the right forearm just above the wrist, and surrounded by a zone of intense redness.

Perchloride of mercury fomentations were ordered, a dose of calomel by the mouth, and the arm was to be kept in a sling.

On the following day the forearm presented every appearance of erysipelas, the zone of redness having extended rapidly along its front surface, the skin being intensely red, swollen, and shining, and the advancing margin raised, and terminating sharply towards the healthy parts.

Zinc oxide and starch were applied thickly and the part enveloped in cotton-wool, and a mixture containing perchloride of iron and sulphate of quinine was given four-hourly.

March 11th.—The disease had spread rapidly up the arm, the affected skin on the forearm being paler than that higher up, and in the former position was raised into vesicles and bullæ containing clear, straw-coloured fluid.

Ordinary remedies were all tried, but the advance continued and soon extended upwards on to the side of the neck as far as the mastoid process and the ramus of lower jaw, then across the middle line and downwards as far as the clavicle and sternum. From these points it passed over the left side of the neck and clavicle, and so down the left arm and forearm, stopping at the left wrist in the course of two to three days.

During all this time the girl had no constitutional disturbance, the temperature not rising above 99° F., and there were no rigors, headache, nor vomiting. It was with difficulty that she could be persuaded to lie in bed.

Most of the bullæ burst and discharged clear fluid, and subsequently there was a profuse flaking and peeling of the epiderm along the whole tract marked out by the complaint. The subjective symptoms were rather severe during the last two days preceding convalescence.

After about three weeks (*i. e.* three weeks after the healing process had been quite completed) she cut her right thumb with a clothes' peg (*sic*), and almost immediately the parts became inflamed; the disease again appeared and ran precisely the same course as upon the occasion just described. It exhausted itself, however, before it reached the left wrist. This arrest was almost certainly due to treatment—attacking the advancing edge with one in four ichthyol in vaseline. The attack culminated in an exfoliative dermatitis, and the subjective symptoms were throughout severe.

A third attack occurred within a month of convalescence from the second. Curiously enough, this appeared as a red patch covered with small vesicles upon the left thumb. There was a great amount of itching, but the advance was checked at the elbow-joint. Three or four days after this primary red patch had appeared she complained of smarting about her left foot. At first there was nothing to be seen, but presently a ring of red erythema was noted, which gradually spread peripherally and covered half the dorsum. This was followed by a small similar condition on the right foot.

At the present time (July 15th, 1906) all the lesions are practically well with the exception of marked staining.

The girl had been looked after by her mother, who soon after her daughter's second attack herself started a similar condition, but

which was much more severe and attended with serious constitutional disturbance. She had a varicose ulcer on her left leg, but there was a clear two to three inches of healthy skin between the upper edge of the ulcer and the point at which the migratory disease started. The condition in the mother seemed more like an ordinary cellulitis, and was followed by the formation of two large abscesses upon the inner side of her knee and in Scarpa's triangle respectively. Half a pint of pus was evacuated from each one of these abscesses. The disease was arrested at Poupart's ligament, and did not spread far around the thigh or leg.

The most effectual treatment, and particularly during the second and third attacks of the girl's disease, was the free application of a 20 per cent. ichthyol ointment in a base of equal parts of Lassar's paste and vaseline. The advancing edges in both the case of the mother and daughter were undoubtedly attacked to their disadvantage by the application of one in four ichthyol in vaseline. In the girl's first attack this treatment was not tried.

There is nothing to say concerning the family or personal history.

Unfortunately, no examination of the pus or serum was made in the case of either daughter or mother.

Hyde and Montgomery, in their description of erysipeloid (Erythema migrans), state that this condition must be carefully distinguished from Crocker's "Dermatitis repens."

In the case of the girl whose condition we have endeavoured to describe there is no doubt a specific peculiarity. As a disease it appears to be an entity, but its appearances at different times and stages can be easily modified by pus organisms. In the case of the mother we may fairly assume that the streptococcus was amongst the agencies, and the transition probably from Dermatitis repens to erysipelas is an easy one.

We have met with, and many practitioners must have met with, a series of cases of follicular tonsillitis, alarming in appearance, but in which the actual organism of diphtheria could not be demonstrated. Presently, or in the same neighbourhood later on, a case with distinct membrane appears, the more formidable organism is easily demonstrated, and the higher type of disease is maintained. It is not unlike comparing the involuted to the evoluted plant or animal. In spite of evolution and the appearance of the fixed higher types the

lower types also remain; and too it may be noted that the lower and higher types may be found either separately or so transitionally mixed together amongst suitable surroundings that it is difficult to say where one begins and the other ends.

CURRENT LITERATURE.

ADDITIONAL OBSERVATIONS ON THE USE OF THE RÖNTGEN RAYS IN DERMATOLOGY. H. W. Stelwagon. (*Journ. of Cut. Dis.*, March, 1906. With discussion.)

At the American Dermatological Association, December, 1905, Stelwagon summed up his experience acquired since May, 1903. The *supply of electricity* was equally efficient therapeutically from the static machine and coil. The static apparatus was less dangerous, yet it was capricious, owing to the varying atmospheric moisture, and he had largely adopted the coil on account of its greater readiness, convenience, and constancy. In connection with the proper apparatus for the production of high-frequency currents the coil is vastly superior. Good curative effects can be obtained in cutaneous diseases with a coil of six inches spark, but one of twelve is probably the most generally useful, and is far superior when used in connection with the high-frequency apparatus. The *vacuum of the tube* should rarely exceed, at the most, that equivalent to a three-inch spark, and between one and two is doubtless the best. Stelwagon likes to vary the vacuum during the exposure by allowing it to slowly rise, especially in treating deep lesions. In superficial dermatoses a vacuum of one inch or less only is required at the beginning of the exposure. The *degree of action* necessary varies in different cases. Some affections cure without visible reaction, but in the great majority of cases it is necessary to excite a degree of reaction. Except, however, in such conditions as epithelioma, only the slightest erythema must be caused, and even this is not always under complete control, so that atrophic changes may follow. Patients may possess an idiosyncrasy. *The distance of the tube* and *the time of exposure* should be for safety in the milder dermatoses respectively ten inches and three minutes for the first *séances*, and later rarely exceed six to eight inches and ten minutes cautiously reached. In malignant growths the first exposure can be for five minutes, and subsequently extended to fifteen or twenty minutes or much longer, and the tube can be allowed to touch the surface in obstinate cases. *Protection* (*a*) of parts other than those under immediate treatment, and (*b*) of the operator, is very necessary.

Stelwagon then considered *the curative effect in various* diseases. *Epithelioma* is often cured, sometimes promptly, sometimes only after long treatment; some cases do not respond. In *Lupus vulgaris* we cannot predict the result. In some cases there is a brilliant, though slow, cure; in others the rays are moderately effective, or slight, or entirely negative. In *Lupus erythematosus* the treatment is only occasionally satisfactory. Many cases of *acne* do well, and it is claimed that relapses are comparatively uncommon. The danger of atrophic changes, some-

times considerably delayed, make it desirable to reserve this treatment for obstinate and extensive cases. In *psoriasis* large chronic patches may be treated, and rebellious localised *eczema*. The action is sometimes favourable in *hyperidrosis* and *Keratosis palmarum* and in *sycosis*. Stelwagon said he had not had much experience of the Sabouraud-Noiré plan of *ringworm treatment*, and he was disappointed with the pastilles brought from Paris. Finally, the X-ray treatment should not be used indiscriminately or to the exclusion of older methods. He advocates caution and conservatism in non-malignant dermatoses, and that the treatment be used more as an adjunct to tried methods except in inveterate cases.

The following are some of the points brought out in the discussion. With regard to gauging *dosage* Allen said the results with Sabouraud's radiometer differed with the size of the tube and distance of the disc from the anode. Pusey regarded the Sabouraud-Noiré pastilles as useless. He followed Freund's technique and found that with the exercise of caution and patience the application of rays was neither capricious, nor unreliable, nor dangerous. He relied greatly on the character of the glow in the tube; he preferred the pale apple-green tint. Bronson also relied chiefly on the character of the glow, and preferred a yellow colour, indicating a lower tension for superficial dermatoses. Hartzell said that in view of absence of any reliable method of measuring the dose he did not see how it was possible to avoid untoward effects occasionally. He called attention to a species of filter, employed by G. E. Pfahler, of Philadelphia, consisting of a piece of shoe-leather which intercepts the harmful rays. Pusey said this was on the same principle as Elihu Thompson's aluminium foil screen.

Pusey treats *acne* by five-minute daily exposures at a distance of 15 cm. Allen said it was not necessary to produce dermatitis, as the object was to act on the deep follicles and glands. Bronson found no remedy to compare with the rays in obstinate Acne indurata, and here the object was to produce just the necessary degree of atrophy which usually required a slight erythematous reaction. Pustular rosacea also often did well. Gilchrist employed X-rays in acne until a mild erythema developed, or until the patient complained of itching or flushing at night. It seemed to be admitted that slight atrophy and other changes might follow this treatment in certain acne cases and after treatment for hypertrichosis. Amongst other dermatoses benefited are chronic psoriasis, eczema in its different phases, Lichen planus, etc. F. H. Montgomery preferred the softer tubes. Even if it were possible to control accurately X-ray dosage, individual susceptibility stood in the way of any prescribed formula. Stelwagon, in reply, said colour was not reliable in his experience. Authors in describing the amount of current employed ought to state the voltage as well as the amperage.

T. C. F.

WARTY GROWTHS, CALLOSITIES AND HYPERIDROSIS AND THEIR RELATION TO MALPOSITIONS OF THE FEET.

W. A. Hardaway and N. Allison. (*Journ. of Cut. Dis.*, March, 1906.)

In a communication made to the American Dermatological Association the authors called attention to flattening of the longitudinal and of the anterior transverse arches of the foot as a factor in many cases of local warty growths, callosities, and hyperidrosis. Traumatism, blows, heavy marching, and inequalities of sock and sole of the boot have been given as other causes. Orthopædic

surgeons have frequently noted the association of malposition of the feet and local sweating, and Lesser asserts that sweating feet precede the flat foot. Hardaway says that it is well known that callus and warty growths are not uncommon concomitants of hyperidrosis, and thinks that the sweating may sometimes be the first symptom. An important factor in the treatment of these conditions is to rectify the "malpositions" by suitable corrections.

T. C. F.

THE EGG-SHELL NAIL. J. Nevins Hyde. (*Journ. of Cut. Dis.*, April, 1906, illustrated.)

Hyde refers to the attempt made in conjunction with Ernest L. McEwen to demonstrate the fact that embarrassment of the circulation was chiefly responsible for progressive changes in the skin and nails of the hands and feet, viz. abnormal and persistent coldness of the hands and feet, hyperidrosis, dampness, and bleb-formation, vulnerability contributing to three grades of inflammatory reaction (hyperæmia, inflammation, ulceration), keratosis, and dystrophy of the nails. In the present contribution Hyde devotes his attention to an alteration of the nail observed in young women which he calls the egg-shell nail from the coloration resembling that of the inner surface of the egg of the domestic fowl. The nails were thin, of a purplish-white hue, with a tendency to curve away from the bed at the free end.

T. C. F.

A RESEARCH ON NUTRITION IN SKIN DISEASES. Brocq, Desgrez, and Ayrignac. (*Ann. de Derm. et de Syph.*, August, September, 1905, p. 681.)

This research was undertaken in Brocq's laboratory and represents the fruit of five years' observation. The classes of disease observed were very variable, but as far as possible restricted to those showing skin-lesions, without organic changes. The diet was estimated in the following manner. The patient was put upon ordinary hospital diet for three days and the urine examined during this time. From the amount of the nitrogen excreted the average of albumen consumed each day was estimated, and this amount was given thereafter each day as the proteid constituent of the diet; half this amount of fat and four times this amount of hydrocarbons were thereafter given, and 10 grms. of sodium chloride and 1500 c.c. of fluid were added to the diet thus determined. Three personal factors had to be investigated in each case: (1) the degree of corpulence and adiposity; (2) the catalytic excitation or degree of destruction depending on the surface of the body; (3) the intensity of destruction of albumen. Then followed an estimation of the nitrogenous output, the elimination of chlorine, sulphur, and phosphorus, the average urinary molecule, and the renal secretion.

The methods employed in these several estimations are described in great detail and are exceedingly complicated and somewhat difficult to follow. The interpretation of these results is contained in a succeeding paper in the October issue of this Journal, under the names of Desgrez and Ayrignac. Since the urinary output differs in quality enormously with different diets, these latter must be rigidly determined before any data to be ascribed to the disease and not to the diet, can be ascertained. The relation between the nitrogen of the urea and

the total nitrogen excreted is represented by the fraction $\frac{Az''}{Az}$ t. Since the secretion of urea is diminished when the hepatic functions are disturbed, and a larger corresponding amount of ammonia is excreted, which is a toxic substance, and since the other nitrogenous substances, non-ureic, are equally noxious, this fraction represents roughly the ratio of non-toxic to toxic substances excreted, and becomes important to determine. The normal ratio between these two nitrogenous factors is stated to be ·84 – *i. e.* 84 per cent. of urea to 16 per cent. non-ureic nitrogenous matter (uric acid, ammonia, creatinin, etc.). The proportion of urea to uric acid, the proportion of phosphorus to the total output of nitrogen, the proportion of sulphur to the total output of nitrogen, are in turn determined and expressed as formulæ. Since nutrition depends on the disintegration of the very complex molecule albumen (molecular weight 6000–10,000) into less complex molecules, of which urea is one of the simplest (molecular weight 60), it seems that the more active the metabolism the more nearly do the substances resulting from disintegration of albumen approach in simplicity the urea molecule. As a practical conclusion it may be said that when the average molecular weight of these products exceeds 76 one may suppose that nutrition is defective; and when the chemical changes are too active, as, for instance, in fevers such as pneumonia and typhoid, the average molecular weight of the substances excreted will be below 76 (about 63–65).

An extremely complicated method of estimating the state of the renal functions is described, too lengthy to abstract here.

It is claimed that these urinary formulæ, when the diet is constant, indicate by their changes the varying effects of diseases, and the comparison of these changes in different diseases remains to be made.

E. G. L.

A CASE OF EARLY PEMPHIGUS FOLIACEUS. Brousse and Bruc. (*Ann. de Derm. et de Syph.*, November, 1905, p. 853.)

The patient was a man aged 46 years, a labourer with no constitutional disease, except that he was a hard drinker. The first cutaneous symptom was a "pimple" on the ala of the nose; this was succeeded by intense general itching and an erythematous eruption, followed by the development of bullæ, which became generalised. Loss of appetite, and diarrhœa, and great depression were associated with these symptoms. After a month in hospital exfoliation followed, large, moist flakes being shed from the greater part of the body. The diarrhœa and general weakness continued. An examination of the blood showed: Polynuclears 69·50 per cent., mononuclears 18 per cent., eosinophiles with coarse granules 12·50 per cent. The patient was kept in hospital for six months, and at the end of this time he became delirious, the temperature rose steadily, a fœtid exhalation from his body became noticeable, and he died somewhat suddenly. At the autopsy the heart and liver were found to be fatty, the lungs emphysematous, the spleen soft and friable, the kidneys congested.

A detailed description, too long to abstract, of the histology of the skin is given, and two plates, one depicting the clinical, the other the histological, conditions are added.

E. G. L.

SPIROCHÆTE OF SYPHILIS (SPIROCHÆTE PALLIDA). Burnet. (*Ann. de Derm. et de Syph.*, November, 1905, p. 833.)

This paper has to do with the morphology and classification of this organism not its relation to syphilis. Schaudinn's researches a year before the announcement of his discovery of the *Spirochæte pallida* proved that trypanosomes could in certain stages of their life-history assume a form which he considered identical with spirochæte, and, again, a form of trypanosome was observable in the cycle of evolution of the parasite of malaria. Thus coccidia, trypanosomes, and spirochætes are all stages of evolution of one type of organism or protozoon. Schaudinn and Hoffmann in April, 1905, described the *Spirochæte pallida* as having the following characters: length, 4–10 μ, usually 7 μ; width, always under $\frac{1}{2}$ μ, often inappreciable; from 3–12 turns of a spiral, fine, closely-set, almost angular; with rotation on the longitudinal axis; extremities pointed. Sometimes there is an indication of a wavy membrane. The addition of normal saline to the excretion containing spirochætes does not kill the latter, but this organism readily dies outside the habitat in which it is found. In concentrated glycerine the spirochæte becomes immobile in 5–10 minutes. Attempts at cultivation have hitherto been unsuccessful.

In October, 1905, Schaudinn in a further contribution found cause to modify certain of his earlier views. He was no longer of opinion that the so-called spirochæte of syphilis was a true spirochæte, and he no longer included this group of organisms in the class of Protozoa. The points which distinguish "*Spirochæte pallida*" from other spirochætes are: their thinness, the great number of spiral twists (10–26), their difficulty of staining, and the pink coloration with Giemsa's stain as compared with the blue coloration of other spirochætes with the same stain; their pointed extremities as compared with the blunted extremities of other species.

The circumstances that *Spirochæte pallida* has no wavy sheath, that it has flagella, and that the spiral is permanent, not merely a phase in the movement of the organism, have led Schaudinn to withdraw this species from the group of spirochætes, and he is inclined to accept the name of *Spironema pallidum* proposed by Villemin of Nancy, in the place of his former designation. The method of coloration of Giemsa is given in detail, together with those adopted by Reitmann, Proca and Vasilescu, and Löffler; and special methods for the staining of this organism in section are also added.

E. G. L.

BULLOUS FORMS OF HYDROA VACCINIFORME (BAZIN). Constantin. (*Ann. de Derm. et de Syph.*, December, 1905, p. 915.)

After reviewing the previous literature, Constantin describes a new case. The patient was a boy, aged 12 years, and the eruption appeared in September, 1904, on the face, on the palmar and dorsal surfaces of the hands, on the forearms and wrists. In a week the eruption was at its height. The general health remained unaffected, and the cure was complete within one month. He was seen again in June, 1905, with a recurrence of the bullous eruption, which now occupied the face, the hands, and the left foot.

The blood was examined and showed a polynuclear leucocytosis, but no eosinophilia and no change in the red cells.

Histological examination of a recent bulla showed that this was situated between the epidermis and corium. It was filled by a fibro-cellular exudate and was unilocular. The corium showed a perivascular infiltration of cells, but little diffuse infiltration in the connective tissue.

E. G. L.

LUPUS ERYTHEMATOSUS IN THE FORM OF ATROPHODERMA IN PATCHES. THIBIERGE. (*Ann. de Derm. et de Syph.*, December, 1905, p. 913.)

THE patient was first seen by Thibierge and shown at the French Dermatological Society in 1891. He has been under observation from time to time in the intervening fourteen years. At that time the diagnosis of Lupus erythematosus was not made, and it was classed as an "atrophia maculosa cutis," Jadassohn reporting a similar case under that name soon after seeing Thibierge's case. Other similar cases have been reported by Nielsen, Heuss, Du Cartel, and De Beurmann. The facts common to these descriptions are the appearance, usually on the face, of a red macule (sometimes a papule), which becomes atrophic and so depressed below the general level of the skin; the surface is smooth and there is evident loss of elasticity of the skin. No telangiectases as a rule occur. The patches are oval, sharply circumscribed, sometimes symmetrical; they enlarge by peripheral extension and are very chronic. The position, shape of the patches, the involvement of the scalp, their chronicity, and frequent tubercular associations make the author think such cases are really Lupus erythematosus. Jadassohn and Heuss obtained sections from patches of this kind on the trunk and limbs and demonstrated the loss of elastic tissue, and cellular infiltration around the vessels and glands, appearances quite compatible with the diagnosis of Lupus erythematosus.

E. G. L.

REVIEWS.

TREATMENT AND PROPHYLAXIS OF SYPHILIS.*

THIS volume consists of the translations of Professor Fournier's well-known treatise on the *Treatment of Syphilis*, second edition, and of his work on the *prophylaxis* of the same disease. The work of translating has been entrusted to Dr. C. F. Marshall, who has accomplished it so successfully that it is only occasionally possible to detect from the letterpress that it is a translation. There is so much that is instructive and brilliant in Fournier's writings on the subject of syphilis, on which he is probably the greatest living authority, that it is impossible to do justice to this work in a brief review, and it will only be possible here to refer to some of the more salient features in his teaching as embodied in this volume. In the Introduction he points out the essential difference between treating syphilis the disease and simply treating syphilitic

* *Treatment and Prophylaxis of Syphilis.* By ALFRED FOURNIER. English Translation by C. F. MARSHALL, M.D., F.R.C.S. London: Rebman, Limited, 1906. Price 21*s.* net.

lesions, and the importance of prolonged and thorough treatment. In the first two chapters the old fallacy that syphilis is a self-curative disease, and that consequently it is unnecessary to treat it, is referred to. In his large experience Fournier knows scarcely any instance of untreated syphilis in which more or less severe tertiary lesions have not developed, and has counted 241 untreated cases with severe tertiaries in his own practice. On the other hand, the beneficial influence of treatment is equally certain, and the author could cite several hundred observations in which syphilitic subjects who had undergone thorough treatment had become fathers of healthy, good-looking children. It is necessary to treat every case of syphilis, however mild it may seem to be, for it is impossible to preconceive the course of an attack, and it is a common experience that the most insignificant chancre may be followed by the most severe tertiary lesions, such as cerebral disease and locomotor ataxia. Chapter III deals with the disappointing subject of the abortive treatment of syphilis, and the problem of whether by the destruction of the chancre constitutional infection can be prevented. Various methods of aborting the disease have been tried, such as excision of the chancre, extirpation of the neighbouring lymphatic glands, and cauterisation of the local lesion either by the actual cautery or by corrosive sublimate, which not only destroys the syphilitic tissue, but neutralises the virus. Unfortunately, none of these measures has been found to be successful, except in an occasional case, and they are only applicable in a very young chancre of a few hours' standing, without induration or swelling of the satellite glands. He quotes the opinion of Ehlers, who has had a very large experience in this method of treatment, and who states that extirpation is "only capable of preventing general infection in certain rare cases," and recommends mercurial treatment even in successful cases.

The discussion of the treatment of the disease is considered under the headings of the specific agents in the treatment, the auxiliary medication, and the hygiene. Of the specific agents, he considers in detail mercury and iodide, and refers in passing to the various other adjuvants of historical interest, such as guaiacum, sarsaparilla, sassafras, etc. Mercury he regards as the "fundamental remedy and most powerful corrective and antidote" for the disease. He refers to the old belief that mercury was the cause of the various secondary lesions of syphilis, and discusses in detail the evil effects of the drug, such as the salivation, gastro-intestinal complications, and the nutritive and cutaneous derangements which may be produced by it. As a preventive against salivation he dwells specially on the hygiene of the mouth, and the necessity of getting the mouth into a good condition before commencing mercurial treatment, by attending to carious teeth and inflamed gums. He advises rinsing of the mouth after each meal and brushing the teeth night and morning with a soft brush and tooth powder; and if the gums be inflamed the painting of them with borax and glycerine. Should the least sign of buccal irritation supervene, the mercury should be stopped. The choice of a method of administering mercury is also considered at length. This depends on the individual case. In a general way Fournier believes that the three commonly employed methods of giving mercury, namely by ingestion, inunction, and intra-muscular injections, vary in their activity in the above order. He considers that ingestion should be avoided wherever there is any tendency on the part of the individual to gastro-intestinal disease or undue irritability, in

children when the digestion is delicate, and whenever it is desirable to give other drugs by the mouth, as in the case of syphilis associated with malaria. Ingestion is, however, so easy, convenient, and practical in comparison with the other methods that unless contra-indicated it is the natural method to choose. The preparations which Fournier recommends to be taken by the mouth are the sublimate and the protoiodide in the form of pills with extract of opium. The sublimate pill contains 1 cgr. of sublimate and 1 cgr. of extract of opium, and the proto-iodide pill 5 cgr. of proto-iodide and 1 cgr. extract of opii (1 cgr. equals about one seventh grain). An adult male should take three sublimate or two proto-iodide pills daily, and an adult female two pills daily. These should be taken before meals. The inunction method is more powerful than ingestion and is of greater service where rapid mercurialisation is desired. For this purpose he employs the so-called "Neapolitan" ointment, which contains equal parts of mercury and lard, 1 to 2 drms. being rubbed in daily in an adult, and 15-30 grs. in an infant, the rubbings to be done on alternate sides of the body each day. The advantages of this method are that it is active, it does not produce gastric complications, and it leaves the stomach free for other drugs. On the other hand, it is dirty, it is even more apt to cause stomatitis than ingestion, and it is difficult to have it thoroughly carried out except in hospital. Injection is the most difficult to get patients to submit to of all the methods. Like inunction, it leaves the stomach free and avoids irritating the digestive organs; it is highly efficacious, and by it the patient is forced to have the exact quantity of mercury prescribed. Daily injections of soluble salts Fournier regards as the least practical of all methods, but is in favour of the weekly injections of the insoluble salts. Of these preparations he regards calomel as the most valuable, and after that "grey oil." The calomel is injected once a week in doses of 5 cgr. in sterilised olive oil. The great disadvantage of calomel is the pain associated with the injection of it, but in certain cases in which all other forms of mercury have failed it acts in an extraordinary manner, clearing up the most intractable lesions. After referring, in passing, to the other methods of employing mercury, such as by mercurial plasters, fumigation, etc., the author discusses the other anti-syphilitic remedy—iodide of potassium. This he is in the habit of giving in doses of 45 grs. daily for an adult male and 30 grs. for a woman. He emphasises the fact that iodide of potassium's great function is to cause the resolution and absorption of the later products of the syphilitic virus.

The writer advocates the commencement of treatment with mercury as soon as a definite diagnosis has been made, and the continuation of the treatment for a considerable time after the active symptoms have disappeared. He deplores the so-called "opportunist" method, in which treatment is stopped whenever the skin and mucous membrane lesions have involuted. He recommends the "chronic intermittent" treatment, giving mercury in periods of four weeks at a time, giving proto-iodide, for example, for two months, then resting six weeks, then six weeks' treatment, then resting three months, and so having four courses in the first year, three in the second, two in the third; after that, during the fourth, fifth, and sixth year, iodide of potassium should be given in a like fashion, beginning with four courses in the fourth year.

The auxiliary medication, such as the hygiene, toxic treatment, diet, etc., are then carefully considered.

The *Prophylaxis* of syphilis forms the subject of the second portion of the volume, and in it the pertinent and difficult problem of the public prevention of syphilis is thoughtfully and philosophically considered. The solution of this problem in this country is beset with even greater difficulties than it is on the Continent on account of the hostile attitude towards reform adopted by a large section of the public, partly as a result of ignorance and partly from misplaced religious scruples. In this connection the writer considers such questions as the influence of syphilis on infantile mortality, the sources of the disease in women, showing that out of one hundred cases, twenty-four were "unmerited," and the great social dangers of syphilis and its capacity for damaging the individual and the family. "In the name of hygiene and public health," Fournier concludes, "I urge the necessity for administrative supervision of prostitution. This supervision should include medical examination of all women convicted of professional prostitution, and internment of those women in cases of contagious disease. But I hold that this supervision should be carried out in a legal, humanitarian, and charitable manner—legal, by the substitution of law for arbitary police discretion: humanitarian, by the substitution of simple and tolerant hospitalisation for the old *régime* of the prison and the penitentiary; charitable, by giving moral help to the prostitute and assistance in returning to a better life." With this pregnant sentence the author concludes a work which may be truly regarded as the standard work on the subject, and without which the library of all those who are interested in the treatment and prevention of the "modern plague" would be incomplete.

J. M. H. M.

On the Relations of Diseases of the Skin to Internal Disorders.*

This work is composed of lectures delivered to qualified medical men at the New York Skin and Cancer Hospital in March, 1905. It is well known to those who are familiar with the author's writings, that he has always taken a wide view of dermatology, and has studied and made laborious researches on urinary diseases as important etiological factors, in the production of diseases of the skin. He has done well in now focussing, as far as lecture-limits allowed, our present knowledge—alas! too often sadly deficient – on the relation of the interior to the exterior disorders. In these days, when bacteria and other micro-organisms are proved factors in the pathogeny of many skin-diseases, the fact is apt to be lost sight of, that unless the soil on which these germs are sown is favourable the human organism is often able to resist them, and when it does not, it is necessary to investigate what condition in the patient has broken down the barrier, which Nature as a rule erects against injurious microbic invasion. It is from this point of view that Dr. Bulkley approaches his subject, and passes in rapid review the various internal disorders, which have in his experience been from time to time important etiological factors, which have to be taken into account in relation both to the origin and treatment of inflammatory diseases chiefly, though even in

* *On the Relations of Diseases of the Skin to Internal Disorders.* By L. Duncan Bulkley, M.D. New York and London: Rebman, Limited, 1906. Price 6s. 6d. net.

relation to syphilis and scrofulosis he insists that visceral conditions have an important influence on the course of those diseases. With such a wide field to cover in three lectures—for the fourth is devoted to treatment—the various subjects have necessarily to be discussed in somewhat general terms, but we think it is misleading to speak of "acne" as if it were a single definitive disease, instead of a generic name for a group of widely different diseases; and similarly to emphasise the frequency of visceral diseases as a cause of outbreaks of psoriasis, without distinguishing between those cases which primarily occur in childhood—about one third of the whole—and those which begin after thirty is not quite consonant with clinical experience. No doubt, however, if these lectures come to be the foundation for a larger and more comprehensive work on this subject any such ambiguity will be removed. In the last lecture, treatment—founded on the principles set forth in the preceding lectures—in relation to diet, hygiene, and medicine is set forth, and many valuable practical hints derived from the wide experience of the author are embodied—*e.g.* giving milk during the alkaline tide of the digestive process to those who find or believe that they cannot take milk in the ordinary way. Altogether the work is one which both general practitioners and dermatologists can read with pleasure and profit.

H. R. C.

Diseases of the Skin. *

The value of Dr. Jackson's "ready reference handbook of diseases of the skin" has been enhanced in the fifth edition by the addition of various new sections and a number of reproductions of photographs. The full title aptly describes the character of the book, for it is essentially a ready reference handbook rather than a complete text-book on skin-diseases, and as such it is adequate. The various diseases are described in sufficient detail for the general practitioner and the student. The question of treatment is carefully considered, and the difficulties of classification are avoided by adopting an alphabetical arrangement. New references are added on Acne agminata, Acne telangiectodes, Acrodermatitis perstans, Botryomycosis hominis, Cheilitis exfoliativa, Folliclis, Granuloma annulare, Granulosis rubra nasi, Hyponomoderma, and Veld sore. The advisability of adding references to so many rare affections of the skin in a book of this nature is debatable, and several of these are so much in the nature of dermatological curiosities of uncertain nature and etiology that they might have been omitted without disadvantage. It seems to us unfortunate to further propagate the antiquated and inappropriate term of "Botryomycosis hominis."

Portfolio of Dermochromes—Supplement.†

The success which Professor Jacobi's *Portfolio of Dermochromes* has achieved has induced the author and his publishers to issue a third volume or supplement

* *Diseases of the Skin.* By George Thomas Jackson, M.D. Fifth edition. London: Henry Kimpton, 1906. Price 14*s.* net.

† *Portfolio of Dermochromes—Supplement.* By Professor Jacobi. English adaptation of the text by Dr. J. J. Pringle. London: Rebman, Limited, 1906. Price, full leather, £1 11*s.* 6*d.*, half leather £1 8*s.* 6*d.* Paper Cover £1 5*s.* net.

to render the work a practically complete atlas on cutaneous diseases. In the new volume the very high standard of its predecessors has been maintained. The perfect modelling of the casts, the delicacy of the colouring, the painstaking and truthful delineation of clinical details, added to the fact that the four-colour process adopted for their reproduction leaves little to be desired, have resulted in the publication of a series of dermatological plates which, if not the finest yet issued in the form of a smaller atlas, have certainly, as a whole, never been surpassed. The supplement contains seventy-six coloured illustrations, twenty-seven of which are devoted to acquired and congenital syphilis. With a few exceptions these illustrations are so realistic that the diseases portrayed can be easily recognised from them by anyone who is familiar with cutaneous affections. Some of them have special merit—for example, those illustrating Lupus erythematosus, Lupus pernio, Ichthyosis simplex, and Acne cheloid. Plate XIX is exceptionally interesting, as it represents a sarcoma developing on a pigmented nævus. Plate XX requires the heading of Mycosis fungoides for its identification, and might have been omitted. As in the other volumes, the English adaptation of the text has been done by Dr. J. J. Pringle.

As a whole, the *Portfolio of Dermochromes* may be heartily commended to all who are interested in cutaneous diseases.

Regional Topographical Dermatology.*

In the October issue of this Journal of last year we had the pleasure of reviewing the *Manual Élémentaire de Dermatologie Topographique* by Dr. Sabouraud, of which the volume before us is a translation. With regard to the translation, Dr. C. F. Marshall is to be congratulated in having produced a letterpress which is not only readable, but which has caught to some extent the feeling which characterises the brilliant writing and power of clear exposition of the author. In certain respects the translator has followed perhaps too closely the original nomenclature, and we would have preferred, with the object of bringing the volume into line with the English works on the subject, the substitution of Lupus vulgaris for "tuberculous lupus," Acne vulgaris for "Acne polymorphe," and hyperidrosis for "ephidrosis." In this volume a short but adequate description of the various diseases of the skin as they affect different regions of the body is given, each region being discussed in a special chapter. The diseases are excellently illustrated by reproductions of photographs of Dr. Sabouraud's patients and of the models in the St. Louis Hospital. Such an arrangement is especially designed to simplify the problem of diagnosis for those whose experience in skin-diseases is limited. It forms a ready reference manual on the subject, and is of undoubted value, not only to the busy practitioner, but also to those who have made a special study of dermatology.

* *Regional Topographical Dermatology.* By Dr. R. Sabouraud. Translated by Dr. C. F. Marshall. London: Rebman, Limited, 1906. Price 21s. net.

CORRESPONDENCE.

Weymouth Street, W.,
August 10th, 1906.

To the Editor The British Journal of Dermatology.

Dear Sir,—On page 291 of this Journal (August, 1906) I am incorrectly reported to have expressed an opinion that in cases of *Acne scrofulosorum* the upper extremities are more often attacked than the lower. It is, of course, well known that the seats of predilection are the buttocks and the thighs, but that the eruption may also appear more or less profusely upon the arms and upon the face, and I remarked that, personally, I had more often seen it thus widely distributed than limited to the lower extremities, as in the case then exhibited by Dr. Graham Little, and in several other instances reported by him and by other observers.

It is not, I think, possible to draw any hard and fast line between the cases described and discussed by English dermatologists between the years 1883 and 1890 and onwards, as Acneiform scrofulides (*Acne scrofulosorum*) and the affection known to French observers at a later period (1890 and onwards) under the titles acnitis, folliclis, hydradénite suppurative, etc., and subsequently grouped by Darier and others (1896) under the term *tuberculides*. The only differences appear to be in the areas of distribution of the lesions and in the ages of the patients. While *Acne scrofulosorum* is often regarded as having its chief incidence in childhood, with the lesions distributed more especially upon the buttocks and thighs, *tuberculides* have as seats of predilection the face (as in "acnitis") or the forearms and legs, the backs of the hands and feet, and the margins of the ears (as in "folliclis"), and age incidence in adult life. But such distinction is by no means absolute, and many of the English cases of Acneiform scrofulide have been in adults, while in children the lesions frequently attack also the face and the upper extremities.

Histologically, moreover, it is not possible to draw any distinction between the lesions of *Acne scrofulosorum* of childhood and those of *tuberculides* of older subjects. In five cases examined by myself from the clinic of Dr. Colcott Fox I found the same appearances in all, viz. a deep-seated infiltration of lymphoid cells and of epithelioid cells, with occasionally giant-cells (sometimes only one or two in the whole lesion). In some cases the lesion involved the pilo-sebaceous follicles, in others the sweat-glands and ducts, in one instance both these structures, this distribution being probably dependent upon the arrangement of the vascular plexuses and having only an accidental relation to the follicle or the sweat-apparatus. For this reason the term "nodular tuberculide" is preferable to that of "acneiform tuberculide," which I am reported to have made use of. On the other hand, the name *Acne scrofulosorum*, although "acne," from a pathological point of view, is incorrect, bears associations with the names of Bazin, Colcott Fox, Radcliffe-Crocker, and Pringle, which more than justify its continued employment—to my mind, synonymously with "nodular tuberculide" and not restricted to cases occurring in children.

I am, etc.,
H. G. Adamson.

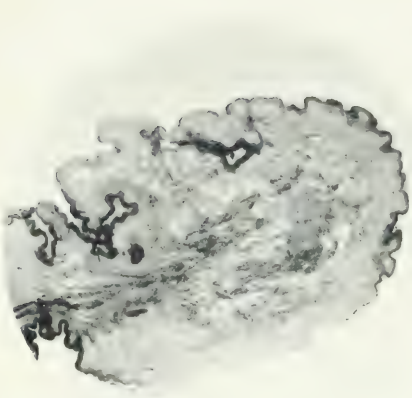


Fig. 2

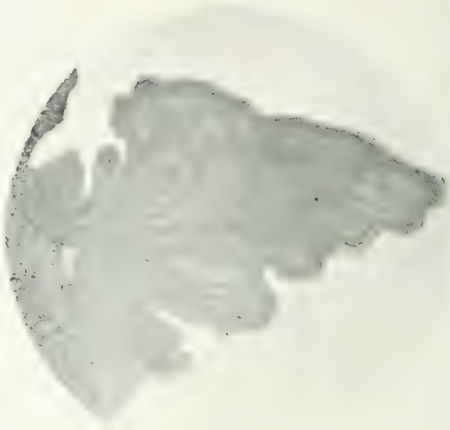


Fig. 3.



Fig. 4

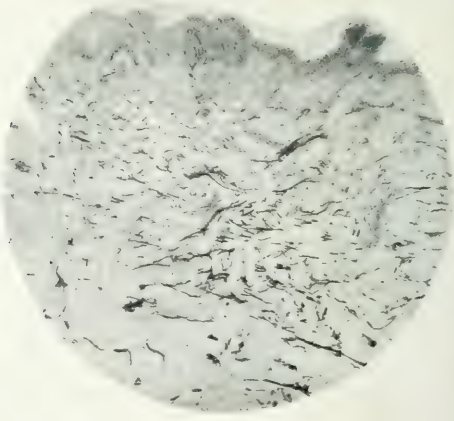


Fig. 5.

Dr. Allan Jamieson's Case of Molluscum Fibrosum.



Fig. 1.

Dr. Allan Jamieson's Case of Molluscum Fibrosum and Adenoma Sebaceum.

THE BRITISH

JOURNAL OF DERMATOLOGY.

NOVEMBER, 1906.

MOLLUSCUM FIBROSUM PENDULUM AND ADENOMA SEBACEUM.

By W. ALLAN JAMIESON, M.D., F.R.C.P.E., and LILY H. HUIE.

Jonathan Hutchinson has devoted one of his most interesting and instructive lectures to the subject of Molluscum fibrosum,* and even now the clinical details therein set forth can hardly be improved upon. The characters of this complaint, which, when the tumours are at all plentiful, is an uncommon one, are, however, so well known that it is superfluous here to re-describe them. Its association with Adenoma sebaceum has also been noted, and some etiological connection has been suspected. Two cases of this kind, where the mollusca varied from scarcely perceptible elevations to pedunculated pouches half an inch long, have recently been under my care, and from one of them, with the patient's sanction, portions of skin were removed illustrative of all the stages, and from the other a small tumour. These have been made the subject of a careful microscopic examination by Miss Lily H. Huie, of Edinburgh, and on one point by Dr. Gustav Mann, of Oxford.

Case I.—Christopher B—, aged 26 years, farm worker, Berwickshire, was admitted to the male skin ward on December 16th, 1905. He had scarlet fever when a boy, but seems to have had good health

* *Lectures on Rare Diseases of the Skin*, 1878.

till five or six years ago. Ten years ago his mother noticed for the first time spots on his face. Some of these on the outlying parts of the cheeks have disappeared, but they have increased in number on the nose and its neighbourhood. At a later date an eruption came on the back, and this has been steadily extending in area and abundance.

Six or seven years ago a horse which he was holding reared and cut him severely on the right side of the head with its fore feet. He was rendered unconscious for a time, but was not attended by any doctor. Some weeks after this he had an epileptic fit, and these have occurred on an average two or three times a week ever since. Three or four years ago he fell from a ladder a distance of twenty feet, when in a fit, and was once more rendered unconscious, but he did not have medical advice. Two years ago he was admitted into Mr. Cotterill's ward and had his head trephined on the right side and a portion of the cranial plate raised. This was followed by a transient improvement.

The patient, though well nourished, is somewhat dull and stupid, and is rather deaf. Before a fit occurs there is a distinct aura, which takes the form of giddiness on the left side. There is an eruption occupying the nose, the cheeks in proximity to the nose and the chin. It is sparse on the nose and chin, but closely aggregated on the cheeks. It consists of firm pale or pinkish nodules, with an uneven surface. These vary in size from a pinhead to a small shot or rather larger. Some have a punctate depression in their centre, and others have a fine capillary network ramifying over. Under the right eye are two aggregated masses of adenomata, reddish in hue and the size of an almond. The characters correspond exactly to those of Adenoma sebaceum.

On the shoulders, chest, and back, especially well marked at the margins of the axillæ, is a very copious eruption of Molluscum fibrosum, assuming, however, particularly here the features of Molluscum pendulum. Most prominent are the small tags or pedunculated pouches, which can be rolled between the fingers. But the earliest stage can also be perceived. This consists of extremely minute prominences, some with a tiny depression in their centre, some without. They do not differ at all from the skin in colour.

On December 27th a row of the smallest growths from the shoulder

was excised, also one of the fully-formed pouches, and a large pouch, a quarter of an inch long, was snipped off, and were placed in corrosive, as well as one of the adenomata, and given to Miss L. H. Huie for examination.

He declined to have the mollusca snipped off, but the condition of the face had considerably improved when he was discharged on January 9th, 1906, from the application of calamine lotion containing some sulphur at night.

Miss Huie has furnished me with the following histological report on four specimens of skin from this case. All were placed in corrosive sublimate immediately on their excision.

Specimen 1.—Removed from the face (by snipping with scissors) is a pilo-sebaceous adenoma. It was imbedded in paraffin, cut transversely, and stained by various methods. The median sections measure 2½ mm. in diameter, and show the tumours to consist of a great number (twenty-six or twenty-seven) of more or less rudimentary hair-follicles with accompanying sebaceous glands. In the centre is a normal follicle with its glands, but containing no hair. The different sebaceous glands are not confluent, and there seems to be no overgrowth of individual glands. The rest of the tumour consists of collagen, with here and there some elastic fibres, and the surrounding epidermal layers are normal. There are no parasites in the glands or hair-follicles. No sweat-coils are included in the specimen (see Fig. 2).

Specimen 2.—A flattened, oval-shaped tumour of Molluscum fibrosum from the back of the shoulder, snipped off at its neck by scissors. It measured 5 mm. in length and 4½ mm. in greatest breadth, was constricted to a narrow neck at its base, and was somewhat pigmented. Longitudinal median sections show a central core of loosely arranged, but very thick and tough collagen fibres, which made cutting difficult. Large spaces exist between them, and a great many more cells are present than in ordinary corium tissue. Towards the periphery the tissue becomes more cellular and less tough. The cells are of several kinds, the most important being large cells resembling the swollen connective tissue corpuscles of many pathological conditions, with large vesicular nuclei and a considerable body of cell plasm. Generally they do not clasp the collagen bundles as healthy tissue cells do, but lie comparatively free in spaces between

them, though one may also see normal connective-tissue cells and forms intermediate between the two. Small cells are also present with deeply-staining nuclei and a little cell plasm. There are also many mast cells with large oval nuclei, containing a great deal of chromatin in granules equalling in size the cell granules. Elastin is only seen in small traces immediately beneath the rete Malpighii, but there is none elsewhere. The epidermal layers are fairly normal, though in parts of the rete there are hollow spaces round the nuclei. The margins of the section are on one side thrown into the folds, suggesting that the tumour had a corrugated surface, but this might have been due to a shrinking effect of the hardening process.

Specimen 3.—Is a smaller and younger tumour removed by deeper excision. It measured about 2 mm. in length, and its sections resemble those of Specimen 2, except that it is more cellular, and was therefore quite easily sectioned, while there is a complete zone beneath the rete where traces of elastic fibres persist in slender branching twigs. The main mass may be described as a very cellular collagen tissue in which elastin is completely absent. The cells resemble those of Specimen 2. Sweat coils, which were not included in Specimen 2, here appear to be normal (see Fig. 3).

Specimen 4.—Is a portion of skin about 8 mm. long, and selected for excision with the help of a hand lens, which revealed some scarcely discernible eminences—the beginnings of new tumours. The sections chosen for description were stained to show the elastic fibre system, and counter-stained to bring out the cells, because in these preparations the area of the new growth in which elastin is absent is most clearly defined. There is already an upheaval of the epidermis, together with a thin layer of the immediately underlying corium, by the intrusion of a small circumscribed area of this new growth, which has here, as it were, made a hole in the elastic fibre system. It is already extending conically in the region of least resistance, viz. externally, where it is covered only by the epidermis and the thin layer of corium tissue in which are seen the slender elastic fibrils normally there existent. The great bulk of the elastic system on each side and below the neoplasm is undisturbed. The new growth itself is best studied, I have found, by Mann's eosin and toluidin-blue double stain. It has a gelatinous appearance and is very cellular, the cells possessing vesicular nuclei, and having their

protoplasmic body drawn out in many directions in a stellate manner. The tissue recalls embryonal connective tissue, and suggests reversion. The picture seems to indicate that the new growth does not originate deeper than where it here appears, above the main mass of the fibro-elastic corium tissue. (An early tumour is seen in Fig. 4 at upper part, to left, showing absence of elastic fibres. Fig. 5 reproduces normal skin from neighbourhood of early tumour, showing natural amount of elastic fibres.)

The illustrations are reproduced from photographs of the three last specimens, prepared by Mr. Richard Muir, of the University of Edinburgh, pathological department.

Case 2.—Maggie M—, aged 11 years, Edinburgh, came to Royal Infirmary on February 6th, 1906, and was seen by Dr. Gardiner. She is a healthy, well-grown girl. Five years since her mother first noticed some small spots in each naso-genial furrow; these increased with considerable rapidity at the commencement, but during the last three years they have undergone little change. There are now closely-set smooth prominences, the size of a pinhead, on each side of the nose, and extending outwards over the inner half of the cheeks. Most of those close to the nose are either a pale pink in colour or a yellowish white; but as the flush portions of the cheeks are approached they become a deep crimson red. There are also some isolated ones on the chin, on the bridge of the nose; and one mass on the left side of the forehead has assumed the proportions of half a pea. The only other noticeable feature is the large amount of down on the outer part of the cheeks. On each side of the back of the neck are two mollusca pendula with a narrow peduncle, and each half an inch long. All over the back can be seen a number of minute growths, white and smooth, some of which are mere specks, others larger, rising one half to one line above the surface, some even reaching the size of half of a very small pea. Some are quite isolated, others aggregated in clumps of two or three, but a large collection of these is found just over the sacrum, the mass being three inches across and an inch in vertical diameter. This is raised fully a line above the surrounding skin. These growths on the back were first observed about a year since. Some of them at the sides of the flanks appear to be passing into the pedunculated stage. Neither on the face nor back do the

growths occasion any subjective sensations. One of the small growths over the scapula was snipped out, with the mother's consent, and put into Muller's fluid. The adenomata on the face were submitted to the X-rays for five minutes twice a week.

At the end of May she had had thirty exposures without any reaction of consequence. The pink colour of the growths nearest the cheek was not modified. Those at the root of the nose were browner since the exposures, but none had disappeared, nor had the telangiectasis diminished in brilliancy. Further exposures were discontinued.

Desirous of ascertaining if there was any perceptible alteration in the nerve terminals in the mollusca, Miss Huie requested her friend Dr. Gustav Mann, of Oxford, to examine into this point. He made a great number of preparations with all the most up-to-date methods, using at the same time sections of healthy skin as a standard of comparison. The work was very difficult, but he succeeded with what is called the "Heller-Mann osmic acid method." His conclusion was that "well-differentiated medullated nerves exist in the diseased skin." Nothing is said of any trace of degeneration.

As to the seat of origin of cutaneous fibrous tumours there is considerable disparity of opinion. The view expressed by Besnier* appears the most reasonable: "There exists a class anatomically and clinically natural of fibrous tumours of the skin, of fibromata, or tumours essentially and truly fibrous, congenital or acquired, of which the principal varieties are, in great part, determined by the stratum of the skin in which they originate; for example (*a*), fibromata of the superficial layer, soft fibromata, Molluscum simplex, genuine, fibrous, pendulum; (*b*) fibromata of the middle and deep layer, hard, flat, sessile fibromata; (*c*) fibromata of the deepest layer of the skin, or hypoderm, spherical tumours, more or less completely movable, hard, secondarily encysted, etc." It has been too much the custom to regard the larger kinds of fibromata the typical ones; on the contrary, the study of the smaller is more instructive. Hutchinson holds that Virchow's suggestion that "they originate in outgrowths from the areolar framework of the subcutaneous fat" is the correct one. The true skin is only involved secondarily—that is, it is simply pushed up, thinned, and atrophied by pressure. Nor are the appen-

* Kaposi, *Path. et Trait. des Maladies de la Peau*, tome ii. Paris, 1891. p. 314.

dages—the glands and hair-sacs—primarily involved, but they also share in the want of nutrition due to pressure from beneath. Von Recklinghausen again "believes* that the skin fibroma originates in the deeper layers of the cutis, and especially in the stratum reticulare, and that it then grows in all directions, as well as towards the free surface. Had the fibroma arisen in the subcutaneous tissue the sweat glands would all have been displaced towards the surface, whereas some of them are displaced downwards." Others† hold that they may spring generally from the portions of the parablast which form sheaths, *i. e.*, the adventitia of the vessels, the nerve sheaths, the interfascicular connective tissue, etc. So that it is evident there is no complete concurrence of opinion.

The most interesting point in the histology of the tumours is that which has been observed by Miss Huie, viz., the almost entire absence of elastic tissue, which the micro-photographs bring out very clearly. Only here and there are mere remnants, appearing in isolated fashion, to be discovered, and even in the papillary layer the fine filamentous branches are quite fragmentary. According to MacLeod‡ the distribution of the elastic fibres in the skin is so universal and regular that they form a scaffolding or skeleton supporting and holding together the various elements of the corium and subcutaneous tissue. And again, "An atrophy of the elastin may occur in association with a hypertrophy of the collagen, and it is a constant accompaniment of a rarefication of the latter fibrous element." Alexis Thomson, quoting von Recklinghausen, says, "There are no elastic fibres in the tumours, except in the loose connective tissue uniting the different strands and masses which go to make up the tumour, and excepting also those which embrace the glands of the skin." Taylor§ remarks that when examined early in their development with the tip of the finger the molluscum tumour feels soft and much more readily depressed than the rest of the skin, and conveys the idea that the whole derma is slightly thinned. If the tip of the finger is placed directly upon one of

* *On Neuroma and Neuro-Fibromatosis*, by Alexis Thomson, F.R.C.S.E., 1900.

† Schwimmer and Babes, in Ziemssen's *Handbook of Diseases of the Skin*, 1885, p. 571.

‡ *Practical Handbook of the Pathology of the Skin*. London: Lewis, 1903, pp. 145 and 186.

§ *Journ. Cut. and Genito-Urin. Dis.*, February, 1887.

these spots at this time, or at any time until it undergoes retrogression, if that occurs, it can be pressed gradually and slowly downwards into the skin and a sensation conveyed as if the integument was pierced by a hole. In proportion as the neoplasm melts away its cutaneous envelope and the encircling ring of skin at the base of the tumour undergoes change, the integument closing up by degrees around the base of the tumour. As it progresses there is often an appreciable thickening of the skin at this point. The hole in the derma is finally obliterated, and eventually no perceptible trace of the neoplasm remains. In other cases, however, the cutaneous envelope persists as a mere empty pouch of skin, or may even shrink to a little warty growth which can scarcely be pinched between the nails—the acrochordon of the older writers. Taylor in these remarks refers to growths distinctly larger than the elementary one described here. There can be no doubt that it is the presence or absence of the elastic element in the skin which occasions the impression that there is a depression or hole. The absence at the site of the tumour permits it to be pushed down, while the presence in normal amount in the neighbouring tissue gives rise to the feeling as if there were a ring of thickened material at the margin of the supposed perforation. The manipulation of the pedunculated and pendulous residuum is likewise deceptive. The transverse section through one of these so-called pouches reproduced here shows that the growth is solid and there is no internal cavity—indeed, the central portion is composed of coarser and stronger interlacing fibrous bands than the periphery. The elastic tissue persists in small amount in the papillary layer of the corium, and stiffens its most external portion immediately under the epidermis, so that when the double of skin is rolled between the fingers the notion of a cavity is borne in upon the mind, though erroneously.

DESCRIPTION OF PLATES.

FIG. 1.—Photograph of patient.

FIG. 2.—Molluscum fibrosum pendulum.

FIG. 3.—Molluscum fibrosum pendulum.

FIG. 4.—Molluscum fibrosum pendulum. An early tumour is seen at the upper part to left, showing absence of elastic fibres.

FIG. 5.—Molluscum fibrosum pendulum. Normal skin from neighbourhood of early tumour, showing natural amount of elastic fibres.

ON CUTANEOUS AFFECTIONS IN VARIOUS DISEASES, WITH ESPECIAL REFERENCE TO CERTAIN ANGIO-NEUROSES.*

By S. ERNEST DORE, M.A., M.D.Cantab.

(*Continued from page* 364.)

Diseases of the Lungs.

The compensatory relation of the respiratory organs to the skin, notwithstanding its practical physiological and therapeutic bearing, is of still less moment in the etiology of cutaneous disease than is that of the kidneys.

The occurrence of febrile herpes in connection with pneumonia need only be mentioned, and various infections, such as tuberculosis, syphilis, actinomycosis, glanders, etc., affecting the lungs and skin, need not be considered here.

There seems to be an undoubted association between asthma and eczema, but the alternation of these complaints is probably less common than is generally supposed.

I have seen several cases of chronic pruriginous eczema, associated with asthma, in which the eczema was unaltered or slightly aggravated during the asthmatic attacks. I recently saw two patients at the Middlesex Hospital on the same day who illustrated this association. In one, a man aged 22 years, generalised chronic pruriginous eczema had begun in early childhood and recurred about once every three years since; he had suffered from recurrent attacks of asthma during the same time, but the eczema was not affected by them.

In the second case eczema alternated with asthma. The patient, a man aged 22 years, with good general health, suffered from dry chronic eczema of the hands, fingers, and arms, from three months of age up to three years. Asthma then developed and lasted until he was fourteen, during which time the eczema completely disappeared. At the age of fourteen the asthma disappeared and the eczema returned and has persisted until the present time. In urticaria asthmatic attacks have been described, due, it is thought, to changes in the mucous membrane of the bronchi analogous to those in the skin.

* Thesis written for M.D. Degree, Cambridge.

The two conditions may occur concurrently, or an outbreak of urticaria may replace an asthmatic attack.

It may not always be easy to say which is primary, whether the urticaria has preceded the asthma or *vice versâ* (Osler). Rapin and Romers divide urticaria of the upper air-passages according as the wheals appear first on the skin and then on the mucous membrane or first on the mucous membrane followed by those on the skin. In the latter form the disease simulates asthma or croup, being associated with dyspnœa and often hæmoptysis. Packard reports the alternation of urticaria and bronchial cough, and Freudenthal describes recurrent attacks of laryngeal urticaria.

Ichthyosis is another cutaneous affection which perhaps disposes to respiratory disturbances, but there is little foundation for the relationship suggested by some authors to exist between acne and lung disease, or between Alopecia areata and deficient aeration by the lungs.

The occasional subsidence of eczema during an attack of pneumonia and its reappearance after resolution of the latter is sometimes observed; this may be explained by the fact that it is not unusual for skin-eruptions to disappear, either temporarily or permanently, during acute pyrexia. Various metastatic conditions of the lungs and other organs, which have been described as occurring in eczema, are explained by Engman by supposing that staphylococci are forced into the general system by rubbing and the prevention of free drainage. Hyde and McEwen suggest that the changes of the fingers and nails occurring in hypertrophic pulmonary arthropathy may be the result of unstable vascular equilibrium, due to the influence of thoracic troubles upon the circulation.

Purpura sometimes occurs in association with pulmonary tuberculosis, and in some of the cases the hæmorrhagic eruption may indicate a grave toxæmic or septicæmic complication (Parkes Weber). Apart from the fact that tinea versicolor is apt to attack persons who suffer from chronic phthisis, true pigmentation of the skin sometimes occurs. According to Byrom Bramwell, this is usually limited to the face, the forehead and nose being most often affected, but in rare cases it may become diffused over the whole body, as in Addison's disease, and may even affect the tongue and buccal mucous membrane.

Diseases of the Digestive System.

Disturbance of the digestive organs is generally regarded as an important factor in the causation of skin-disease. Beyond the fact, however, that errors of diet may aggravate a pre-existing inflammation of the skin, the evidence in favour of this view is not very definite. A few skin-eruptions, of which rosacea is the most important, are affected reflexly by disturbance of the digestive functions. It is probable, however, that toxic absorption from the stomach and intestines play an important part in the etiology of many cutaneous affections. The acute erythematous and urticarial rashes following the ingestion of poisonous substances, such as shell-fish, etc., various drugs, and the injection of antitoxic sera, are familiar examples in which the substance is known; but it is possible that many eruptions of a similar type may owe their origin to the absorption of toxins of an unknown nature, not necessarily connected with the ingesta. Engman thinks that in most of the intestinal disturbances set up by poisonous food the food acts, not as a toxic irritant, but as a mechanical one upon an irritable mucous membrane, as the fingers do upon a dermographic skin, and quotes a case reported by Spillmann in which the smallest particle of solid food would cause a bullous urticaria of the mouth and tongue.

It is difficult to exclude malnutrition as a predisposing cause of eczema, papular urticaria, and other skin-affections in children; but eruptions are not specially frequent in badly-fed children, and increased sweating would be sufficient to account for some that occur in rickets. Lichen urticarus is generally considered to be due to errors of feeding, but, as Colcott Fox points out, it often persists in spite of every care on the side of diet. Leciseur states that a form of infantile eczema characterised by symmetrical red patches covered with yellowish crusts, and occurring in fat, overfed children, is generally due to digestive derangement. In a careful analysis of sixty cases of infantile eczema, Arthur Hall found a remarkable exemption from symptoms of gastro-intestinal trouble such as would be brought about by unsuitable diet. He points out that "the months during which, in these cases, eczema occurs least frequently are exactly the months when the incidence of gastro-intestinal derange-

ment generally is the greatest." Moreover, 54·9 per cent. of the cases examined showed no signs whatever of rickets.

Schamberg calls attention to the association of rashes on the skin, mostly various forms of eczema and furunculosis, with summer diarrhœa in children. According to Mantegazza the *Bacillus coli communis* can produce lesions on the skin by local auto-infection, and he made pure cultures of this bacillus from varicella-like lesions on the skin of two infants suffering from diarrhœa.

Many affections of the lips, tongue, and mouth are local infections and do not come within the scope of this paper; but some skin-diseases, such as Erythema multiforme, pemphigus, Dermatitis herpetiformis, and Lichen planus, are occasionally attended by lesions on the tongue and mucous membrane of the mouth, and there seems to be no reason why similar manifestations should not occur lower down in the alimentary tract. This has been known to occur in exudative erythema (Osler) in urticaria (Pringle) and in pemphigus and xanthoma. Pringle and Chittenden have each reported a case of urticaria with recurrent hæmatemesis. The former author came to the conclusion that the cause of the hæmatemesis was the result of hæmorrhage from the stomach, due to capillary rupture occurring when the mucous membrane of that organ was in a state analogous to the urticarial condition of the skin. Owing to the transitory nature of many cutaneous affections, and the difficulty of identifying their *post-mortem* appearances, it is probable that the alimentary tract is affected more often than is generally supposed. Symptoms of gastric disturbance might in this event be a result of the skin-disease and not its cause. Osler (92) has shown that exudative erythema, Henoch's purpura, Peliosis rheumatica, urticaria, and angio-neurotic œdema may be accompanied by visceral manifestations; these include gastro-intestinal crises, hæmaturia and nephritis, hæmorrhages from the mucous surfaces, cerebral symptoms, and pulmonary complications, and by arthritis. He points out that in children with colic a history of skin-lesions, arthritis, or intestinal crises is important, as such cases have been mistaken for appendicitis.

Chronic appendicitis is thought by H. Fournier to be the cause of certain cutaneous affections. He has seen instances of prurigo, pruritus ani, pruriginous acne, persistent urticaria and eczema, which he attributes to intestinal intoxication from this cause. Motz also

noticed congestive redness of the cheek, labial herpes, and localised sweating of the head and neck and right side of the face in association with acute appendicitis.

Pellagra, which is accompanied by gastric and intestinal derangement, and in which erythema, pigmentation, desquamation, and pruritus occur, is supposed to be caused by a diet of diseased maize, and somewhat similar symptoms occur in ergotism and acrodynia. Senile pruritus is sometimes attributed to indigestion and constipation, but the etiological association is doubtful.

The liver has been credited with an important influence in the production of cutaneous affections, but with the exception of the association of xanthoma and jaundice, the evidence of the connection is scanty. Jaundice is sometimes a precursory or associated symptom in Xanthoma multiplex in the adult; it occurred in twenty-three out of twenty-eight cases tabulated by the London Pathological Society Committee (99), and Crocker (100) states that four fifths of the cases are accompanied by this symptom.

In children the hepatic factor does not come into play (Malcolm Morris). By some authorities the jaundice is regarded as a causative factor, by others (Kaposi, Hardaway) it is thought to be due to the development of xanthoma growths in the liver. Stelwagon does not accept the etiological relationship, owing to the rarity of Xanthoma, the much greater relative frequency of jaundice, and the absence of jaundice in almost all cases of Xanthoma palpebrarum and apparently in all instances of the multiform variety in children and a proportion of those in adults. Various diseased conditions of the liver have been found after death; but, on the other hand, this organ is often uninvolved. According to some observers the yellow colour is not always due to jaundice, but the disease itself may be responsible for the cutaneous discoloration (xanthochromia).

The following observations by Leven illustrated the association of xanthoma with other diseases. In twenty-three cases taken from literature he found that sixteen males and one female were suffering from some other disease, twelve had diabetes, two nephritis, one pentosuria, and one hypertrophic interstitial hepatitis. Only seven of the twenty-three were free from other diseases. In the other sixteen, 75 per cent. of whom were diabetic, the eyelids were unaffected and the eruption disappeared spontaneously or as a result of treatment in thirteen.

Pruritus may be mentioned as a common accompaniment of jaundice. Urticaria, boils, and purpura may also occur (Crocker). Osler says that urticaria and purpura are common in cirrhosis of the liver and cholelithiasis; he also points out that hepatic disease may induce definite pigmentation, as in the diabetic cirrhosis.

Diabetes and other Disorders of Metabolism.

Diabetes.—The cutaneous affections occurring in this disease are due to the malnutrition of the tissues dependent upon the diabetic state, to the action of urine and micro-organisms on poorly resisting tissues, to neuritis, or to toxins circulating in the blood. A dry, rough state of the skin and mucous membranes is usually present, and leads to generalised pruritis and scratching. Occasionally there is hyperidrosis, and localised and unilateral sweating have been observed (Prince Morrow). Feeble circulation and cyanosis of the extremities are sometimes found. The nutrition of the nails and teeth and hair suffers; the finger- and toe-nails become brittle, lose their normal lustre, and may be shed. Rarely hæmorrhage takes place into the nail-substance (Hartzell). Trophic changes leading to deformity of the nails may also occur as the result of diabetic neuritis. The hair becomes dry and thin, and there may be more or less complete alopecia. In addition to general pruritus a severe form, often localised about the genitals, is common, and may give a clue to the diagnosis of the condition.

Various forms of erythema are described. There may be symmetrical patches on the face or a papular erythema usually occurring in young subjects, consisting of split-pea-sized, pinkish, slightly elevated lesions situated on the forearms and legs, which may coalesce to form variously sized patches. Urticaria is also met with. Eczema occurs chiefly in the genital regions, especially in women, and is complicated by the presence of torulæ. It may spread to the abdomen and thighs or other flexor surfaces, where it often reaches an acute stage. Balanitis and balano-posthitis are familiar complications, and a recurrent herpetiform eruption on the prepuce resembling Herpes præputialis has been seen by Hartzell.

Herpes zoster is not uncommon, and bullous and pemphigoid lesions have been reported. Boils occur singly or in crops, mostly in the

nuchal and gluteal regions. The association of carbuncles, often of a severe type, with diabetes is well known. A severe form of acne—Acne cachecticorum—may be met with in elderly subjects and in the later stages of the disease; chronic papular urticaria and various impetiginous and lichenoid eruptions have been described. Gangrene accompanying diabetes may be dry or moist, single or more rarely multiple, and superficial or deep. Occasionally it may be symmetrical, simulating Raynaud's disease; it usually develops from a pre-existing lesion, such as a boil or carbuncle, or from a slight injury, but sometimes no apparent cause can be found. Cellulitis or erysipelas may occur, and œdema of the subcutaneous cellular tissue of the lower extremities has also been described.

Xanthoma diabeticorum is now a recognised manifestation of diabetes; it occurs as yellowish conical papules on the elbows, knees, and buttocks, and may develop before sugar appears in the urine. (Malcolm Morris.) Sherwell thinks that blastomycetic dermatitis is possibly associated with diabetes, but no proof of this has as yet been given.

Purpura is sometimes seen both in the early and late stages of diabetes, probably as a direct result of the dyscrasia. Saundby refers to little centres of necrosis in the skin about the ankles and dorsum of the feet, first appearing as small round red spots the size of a pin's head.

Sugar has been met with in the urine of persons suffering from Dermatitis herpetiformis—Winfield published four cases—but there is little evidence for considering this disease to be a manifestation of diabetes, and still less in the case of psoriasis, with which glycosuria has been observed by Nagelschmidt.

Kaposi has described a serpiginous gangrene following a bullous eruption in a case of diabetes, and also a condition he calls "Papillomatosis diabetica," in which an inflammatory patch on the back of the hand ulcerated and became the site of numerous papillary outgrowths.

The condition described as diabète bronzé is not necessarily associated with glycosuria, which appears to be a late result of the hæmochromatosis. Of five cases described in America there was diabetes in one only (Rolleston). In this country cases have been reported by Galloway, Saundby, and Parker.

Gout and osteo-arthritis.—The skin, no doubt, shares in the general disturbance of nutrition accompanying gout, but no special variety of gouty eczema is now recognised, and some authors deny any connection between the two processes. There is little evidence to show that excess of uric acid in the blood and tissues is a cause of cutaneous eruptions. Quinquaud found that injections of uric acid in the guinea-pig and rabbit produced no effect on the skin. In the dog, however, similar injections provoked an eruption of small discrete vesicles, occasionally papulæ, and rarely pustules scattered over the body. The joint changes which are occasionally met with in psoriasis partake more of the nature of osteo-arthritis than of gout. Osteo-arthritis itself is rarely accompanied by any cutaneous changes with the exception of pigmentation, occurring in small areas on the hands and face. Sweating is a common symptom of this disease. Jamieson has described cases of angio-neurotic œdema occurring in connection with osteo-arthritis.

Diseases of Ductless Glands and Blood.

Changes in the skin may occur in Graves' disease, myxœdema, Hodgkin's disease, Addison's disease, and leukæmia.

The cutaneous affections occurring in Graves' disease are briefly as follows:

The pigmentary changes are hyperpigmentation and leucodermia.

Vasomotor changes include transient flushing of the skin, with subjective symptoms of heat, local or general hyperidrosis, and diminution of the electrical resistance of the body, pruritus, factitious urticaria, œdema, and purpuric erythema.

The œdema of Graves' disease may be local, and either transient or persistent or general; a solid non-pitting variety is occasionally met with.

In addition to the cases I referred to in my paper on the cutaneous affections associated with Graves' disease, another instance of solid œdema has recently been reported by v. Schrötter. In his patient there was marked pigmentation, followed later by a remarkable swelling in the legs; the swelling was like that of myxœdema, and pressure with the finger produced no pitting. Microscopical examination of the skin and subjacent tissue showed a sort of

lipomatosis; occasional shrinkage of the swollen skin was also noticed. Under thyroid treatment the swelling was reduced, the thyroid enlargement diminished, and the tachycardia became less marked. Among trophic changes loss of hair and Alopecia areata (rarely universal alopecia) atrophy of the nails, and caries of the teeth may occur. Sclerodermia and in rare instances gangrene have also been observed. Some further observations have recently been made by Nevins Hyde and Ernest McEwen. They describe a case of hydrocystoma (evidently associated with the profuse sweating so common in Graves' disease), a case of extensive telangiectases, with a reference to another instance reported by Létienne and Arnal and two cases of cutaneous pruritus, in one of which angioneurotic œdema occurred.

In connection with the case I described in which a woman with well-marked Graves' disease and a doubtful syphilitic eruption on the buttock developed peculiar yellowish raised plaques somewhat resembling xanthoma on the knees, I have since seen a reference to a somewhat similar case shown by Colcott Fox, which I had previously overlooked. The patient, a single woman aged 29 years, the subject of exophthalmic goitre, was shown by him at the Dermatological Society of London, on June 9th, 1897. On both shins were three or four rounded macules, each about the size of half a crown, smooth and polished, pale in colour, with a pinkish tint showing through, atrophic, with denser consistence than the normal skin, and without a congestive halo. The lesions on the left shin had become superficially ulcerated or excoriated within the last two years. The patient stated that the lesions had existed for eight or nine years, but there was a vague history of some persistent bruises of the shins in childhood. The exhibitor stated that he had passed in review the diagnosis of circumscribed sclerodermia, idiopathic atrophy, Dermatitis artefacta, atrophy or scarring secondary to syphilis (hereditary or acquired), Bazin's Erythema induratum, Lupus erythematosus, and Raynaud's disease. He was disposed to exclude them all, except perhaps the last, and this diagnosis had but a slender foundation to rest upon. The diagnosis remained uncertain after discussion by the members of the Society.

The condition of the skin in myxœdema is the reverse of that found in Graves' disease. Instead of being hot and moist, it is cold, dry

and scaly, and local and general thickening may be observed. There is imperfect nutrition of the hair, teeth, and nails, and there may be œdema of the feet and legs.

In Hodgkin's disease pigmentation is fairly common, and appears to depend upon involvement of the solar plexus and nervous structures adjacent to the suprarenal bodies. In a few cases secondary tumour-formation in the skin has been recorded. A pruriginous eruption consisting of pale, itching papules is described by German observers, and called pseudo-leukæmic prurigo.

Pruritus, urticaria, eczematous eruptions (leucémides of Audry), and exfoliative dermatitis—exanthème exfoliant universel pseudo-leucémique—have also been recorded (Wasserman, Pinkus, Nicolau). Tumours of the skin, especially of the face, are found more often in true lymphatic than in pseudo-leukæmia. Professor Shattuck, of Boston, described an erythematous, maculo-papular, vesicular and hæmorrhagic eruption in a patient who died of lymphatic leukæmia after an illness of only nine weeks. Purpura may be one of the hæmorrhagic manifestations of leukæmia or pernicious anæmia, and pigmentation also occurs in these diseases. Other diseases with which purpura is associated, such as scurvy and hæmophilia, may also be mentioned.

Although the functions of the thyroid gland and suprarenal bodies are as yet imperfectly known, there are reasons for thinking that they exert some influence on cutaneous processes. The therapeutic administration of thyroid extract has been found useful in some cutaneous affections associated with dryness and malnutrition of the skin, *e. g.* ichthyosis and prurigo, as well as in Lupus vulgaris. Supra-renal extract has been given with some benefit for Lupus erythematosus. The secretion of these bodies may have some effect upon the cutaneous vascular supply by acting upon the vasomotor centres. The power of suprarenal extract to cause constriction of the arterioles is well known. Thyroid secretion seems to have the opposite effect. In my paper on the cutaneous affections occurring in Graves' disease, I suggested that the cutaneous symptoms depended upon vascular dilatation, contrasting with the vaso-constriction of myxœdema, sclerodermia, etc. No constant changes of blood-pressure, however, have been demonstrated in patients suffering from Graves' disease. Donath found that intravenous injection of a

watery extract of thyroid gland caused a fall of blood-pressure, but observations on the blood-pressure of seventeen cases showed a fall of blood-pressure in but a small number; more often it was normal or raised. Spiethoff (125) came to much the same conclusions: in seven cases a rise or fall was present; in less severe cases there was no essential difference from normal individuals.

Dr. Galloway's case referred to above, in which there was universal congestion of the skin, is interesting on account of the resemblance, pointed out by the observer, between the blood-vessel phenomena and those occurring in Graves' disease.

The pigmentation of Addison's disease need not be discussed here, but its analogy to that occurring in exophthalmic goitre is interesting. In both diseases there is a lowering of vascular tone and vaso-dilatation, and the supposition that this is due to absence of the arterial constricting properties of suprarenal secretion in the one case and the excess of thyroid secretion causing vaso-dilatation in the other suggests an explanation for the pigmentation in both cases. Administration of suprarenal extract has been found beneficial in Graves' disease. It has been suggested that the skin itself has an internal secretion, but in the present state of our knowledge the subject is scarcely a profitable one for discussion.

(*To be continued.*)

THE OPSONIC TREATMENT OF CERTAIN DISEASES OF THE SKIN.

By GEORGE PERNET and J. LEMARE BUNCH.

(*Continued from page* 341.)

Case 2.—Edith P—, aged 41 years (No. 1075, 1905). In her case the disease had started in the right ear at the age of eighteen years and was ascribed by the patient to a blow from a cricket ball. This part was cicatricial and quite atrophic. Twelve months before she was first seen the disease had attacked the nose and also the left temple.

In this case the injections of T.R. were made under the skin of the bridge of the nose, commencing with $\frac{1}{1000}$ mgm. on December 8th, 1905. The patient had also employed fomentations locally. Mist.

Sacch. ust. has been given internally from December 1st onwards. As regards the recent active lupus of the nose, which had given rise to considerable swelling, infiltration, and redness, an inhibition of this activity was gradually brought about, but the patient's appearance did not improve very rapidly at first inasmuch as the lupus tissue did not involute and the disfigurement was still considerable. The opsonic index improved as a result of the injections, but the patient was living under unfavourable hygienic conditions and her work (laundry work) was trying. On May 29th, 1906, the dose of tuberculin was diminished to $\frac{1}{2000}$ mgm. and an injection of 600,000,000 *Staphylococci aurei* was also given as her opsonic index to staphylococci was subnormal (·92). The same doses both of tuberculin and *Staphylococcus aureus* were repeated on June 19th, her opsonic index to staphylococcus being brought above normal and the clinical appearances improving. Since then she has improved still further, and she still remains under treatment.

Case 3.—May E—, aged 46 years (No. 1082, 1905). This patient has been under the observation of one of us (Pernet) since 1900. The lupus had then been present thirty-eight years, having commenced, apparently, as an infection from tuberculous glands. In May, 1900, there were patches of disease in front of both ears, especially on the left side of the face. They were crusted and ulcerated, the left ear being involved, with satellite nodules beyond the periphery. The affected parts were scraped with a sharp spoon and pure carbolic applied, followed up by acid nitrate of mercury, to recurrent small foci. In December of the same year the cicatricial areas broke down, with much scabbing and crusting and some surrounding redness. This subsided under soothing local treatment.

The patient was not seen again till December, 1902, when her face was much swollen, the disease having spread during the preceding three to four months. As the case was evidently one which resented surgical interference, she was put on thyroid, her general health fortunately being good.

In January, 1903, the scalp became affected, apparently by direct inoculation as a result of a scratch of a pin six weeks previously. The disease steadily spread on the scalp notwithstanding treatment.

In February, 1903, as the circumstances of the patient were such

that she had to work hard for her living and as she resided not very far from the Camden Hill Laboratory, Dr. Dore very kindly undertook to give her the benefit of the X-rays at my request. This opportunity is taken of thanking him for his consideration and care. The patient had the X-rays from February, 1903, to November, 1905, during which time she had 414 exposures in all (sides of face, scalp, neck). They averaged ten to fifteen minutes in duration at a distance of 6 inches from the anticathode, with a primary of $2\frac{1}{2}$ to $3\frac{1}{2}$ ampères. There was slight inflammation at times, but never any severe dermatitis. The ulceration of the cheeks and scalp healed rapidly, but nodules continued to appear in and beyond the scar. Where the ulceration was deepest the scar was comparatively sound. In addition to the X-rays she had 5 mgms. of radium applied for ten minutes at a time to various satellite nodules near the eye and on the cheeks (seventy applications in all from December, 1903, to May 1904). (For these notes we are indebted to Dr. Dore.) Whilst under X-ray treatment she was seen in a general way by one of us (Pernet), the thyroid being continued and left off according to reaction, the general health being attended to as regards nutrition especially, two or three cold abscesses being opened, including one very large one on the back, which necessitated admission to University College Hospital, and nodules being dealt with in various ways (acid nitrate of mercury, etc.).

Although the improvement was very marked compared with her previous miserable condition, the disease still progressed slowly but surely on the face and scalp, a great part of the latter being now involved.

The case evidently comes into the category of malignant Lupus vulgaris, no doubt as a result of the vulnerability of the patient to the tubercle bacillus (favourable soil).

This being so, it was considered advisable to give her the benefit of the opsonic treatment, which was commenced at University Hospital skin-department on December 8th, 1905, and has been going on ever since. The T.R. injections have all been made near a comparatively recent patch on the outer side of the right thigh, with distinct benefit to that particular patch. The general condition has also benefited, for the disease has not spread, the affected areas of the face having become paler and less indurated.

Severe Ecthyma.

Walter H—, aged 38 years (No. 207, 1906). This patient was first seen on February 20th, 1906, with the history that the skin trouble had started some thirteen weeks previously as the result of a burn of the right elbow. He then presented numerous markedly ecthymatous lesions on all the limbs, some of them with deeply seated crusts and strongly suggestive of tertiary syphilis. As to the syphilis the patient admitted the possibility of it twelve to fourteen years ago. The original lesion on the elbow was undoubtedly the result of a burn. When first seen it was covered with a scab which did not resemble the rupioid crusting of a tertiary lesion. It healed up after a few injections, leaving a scar. Cultivations from this lesion, as from subsequent lesions, showed a mixed infection, chiefly of *Staphylococcus albus* and *aureus*.

Notwithstanding the possibly syphilitic basis of the disease it was decided to treat him by injections of anti-staphylococcal vaccine only, in order to deal with the secondary infective element. This was begun on February 20th, 1906, with ½ c.c. of mixed staphylococci (600 million). The beneficial effects were quickly apparent, for a few days after this injection there was distinctly less inflammation about the lesions and the crusts were somewhat looser.

The case responded well to the mixed staphylococcal injections, and by March 16th the crusts had come off and the sores were healthy-looking and granulating, but there was still a certain amount of infiltration at their borders. No anti-syphilitic remedies, however, were ordered, but the injections were persevered with.

By March 30th the lesions had practically healed, greatly assisted by boracic fomentations, perseveringly applied.

Between March 30th and May 8th he had three injections, each of 250 million mixed staphylococci. Between May 8th (when practically all the sores had healed up) and June 19th he had only one injection of 250 million.

The patient's opsonic index, which on February 20th was 0·87 to *Staphylococcus aureus* and 0·9 to *Staphylococcus albus*, had been increased by March 30th to 1·28 to the former organism and 1·24 to the latter, but by June 19th had gradually fallen, so that it was 0·98 to *Staphylococcus aureus*. His condition clinically was not so good,

and two small breaking down areas had made their appearance on the inner side of the right thigh. The injections of mixed staphylococci were resumed, and by August 7th his opsonic index had again been brought well above normal and the rupioid-looking sores healed. Between August 7th and September 4th no injections were given, the opsonic index had again fallen below normal, and fresh lesions made their appearance. A repetition of the injection again caused a disappearance of the recent ulcers on the limbs and of a small abscess in the abdominal wall, so that when last seen on October 23rd all the lesions were practically healed. The past history of the case shows, however, a marked liability to recurrence when treatment is stopped. No anti-syphilitic medicine of any kind has been given him during the last eight months.

[It should be added in this place that the patient has been for the greater part of the time at the St. Pancras Infirmary; and the authors desire to express their thanks to Dr. Chilcott, the Medical Superintendent of that institution, for kindly allowing the patient to continue his attendance at University Hospital, and also for supervising the fomentation treatment, which has greatly assisted in the cure.]

Emily P—, aged 47 years. This case is interesting to contrast with the preceding, inasmuch as the patient had similar rupioid sores on the trunk and limbs, and was also at first treated with injections of mixed staphylococci only. But these lesions were undoubtedly syphilitic, and although the first injection on April 17th seemed to promise that she would benefit by this method of treatment, further injections during the succeeding month did not sufficiently bear out this promise to justify their continuation. Her opsonic index was at first 0·83 to *Staphylococcus aureus*, and six injections only raised it to 0·97, while clinically the sores evidently had some other underlying factor, which was conclusively proved to be syphilis (although there never was any doubt about the diagnosis) by their reaction to iodide when administered afterwards. The excellent result obtained in the possibly syphilitic case, Walter H—, by staphylococcus injections was, however, felt to be sufficient justification for trying the same method of treatment in this case.

(*To be continued.*)

SOCIETY INTELLIGENCE.

THE DERMATOLOGICAL SOCIETY OF LONDON.

A meeting of the above Society was held at 11, Chandos Street, on Wednesday, October 10th, 1906, Dr. J. J. Pringle in the chair.

The following cases and specimens were shown:

Dr. H. G. Adamson showed (1) a case of *Lichen spinulosus*, which he regarded as being of the type which Brooke had described under the name of "Keratosis follicularis contagiosa." The patient was a boy, aged 11 years. The history of the appearance of the eruption was that six weeks ago he had had a hot soda bath for "rheumatics," and that on the next morning he had come out in a "red rash all over like measles," which itched very much, and that the feet and legs were at the same time swollen. Soon after this the roughness of the skin was noticed. A week ago, when first seen by the exhibitor, his skin presented the following appearances: Over almost the whole body, but especially upon the extensor surfaces of the arms and legs, upon the back of the neck, and upon the forehead and sides of the face the hair-follicles were plugged with small projecting horny spines. The amount of projection varied in different parts, sometimes being but little above the skin level, sometimes sticking out about one sixteenth of an inch. Without any marked grouping it was noticed that the plugs were more thickly placed or more sparsely at different parts. They were well marked upon the backs of the hands, but not of the fingers, upon the sides of the forehead, the neck, the upper arms, and the calves. They were absent at the flexures. Most of the plugs had no inflammatory redness nor papulation around, but here and there were rounded red papules of the size of a hemp seed with a central black plug. The horny plugs could be expressed between the thumb-nails, and showed a smooth, pearly root, and a rough, opaque, horny spine. Under the microscope they appeared to be composed entirely of completely cornified epithelial cells.

The boy was thin and had "winged scapulæ," but there were no abnormal physical signs, and he seemed otherwise in good health. Although there was no evidence of contagion the case was regarded by the exhibitor as of Brooke's type, mainly on account of the dis-

tribution of the lesions diffusely upon the limbs and face, without marked grouping, as in the more classical cases.

(2) A case of *lupus (or ? tuberculides) with multiple lesions localised* to a circular area of about five inches in diameter and with the navel as a centre. The case had been exhibited in May last (*British Journal of Dermatology*, 1906, p. 214); since then there had been no treatment beyond that directed towards improvement of the general health; some few lesions had disappeared, leaving scars, but otherwise there had been no change.

A *section of a lesion* from this case was shown. There was a lymphoid-cell and connective-tissue cell infiltration, with many large giant cells, situated immediately beneath the epidermis and also around a hair-follicle. The large size and abundance of the giant cells suggested lupus rather than a tuberculide. Search had been made for tubercle bacilli but none had been found.

(3) A case of *ringed erythema*. The patient was a boy, aged 5 years. The eruption consisted of rings, of from half an inch to three inches in diameter, distributed with a rough symmetry upon the outer sides of the upper arms and of the thighs. There was one large ring on each arm, half a dozen upon the left thigh, two upon the right thigh, and a small ring upon each calf. The rings began as red, slightly raised, erythematous discs which gradually spread, while fading at the centre, so that circinated bands were formed. The outer half of the band—the advancing margin—remained smooth, red, and slightly raised, while the inner half of the band was scaly and desquamating. The boy had been under observation during nine months, and the eruption had alternately faded and become more marked, at one time disappearing entirely for a space of several weeks. The boy was well nourished and appeared to be otherwise in good health. The exhibitor regarded the eruption as a form of Erythema exudativum.

Dr. Colcott Fox recalled two similar cases of a brother and sister, in which there were very large rings upon the trunk. The cases had been recorded in the *Clinical Society's Transactions*, vol. xiv, p. 67, with a coloured plate, and also in the *International Atlas*, Plate XVI.

(4) A case of *naevoid growth* upon the forehead of a baby, aged 3 months. The growth, which had been present since birth, was a rectangular plaque, yellow in colour, slightly raised, with a smooth

and not nodular surface, firm to the touch, and measuring 1 cm. by 2 cm.

(5) A case of *nævoid growth* in a child, aged 2 years. The growth, which had also been present since birth, was an elongated, lozenge-shaped plaque, with its long axis in the labio-nasal furrow. This patch was red in colour, but on pressure the redness disappeared, leaving the growth temporarily yellow. Unlike the first growth exhibited, this one was somewhat broken up into nodules.

(6) A section from a third case, clinically similar to the above. The patient was a baby, aged 2 months. There had been a narrow yellow firm growth (1 cm. by 0·2 cm.) extending vertically downwards a little to one side of the centre of the end of the nose. This growth had been excised and the sections of the lesion (exhibited) showed that it was entirely made up of sebaceous glands.

The exhibitor thought that the two cases now shown were also probably *sebaceous gland nævi*. Sections would be made.

The nævus on the cheek (Case 5) has since been excised, and sections show under the microscope the typical structure of a soft mole combined with that of a vascular nævus. The vascular part is not marked, the growth being made up chiefly of the characteristic cuboidal cells, with here and there dilated vessels.

(7) Microscopical specimen of a *ringed hair* from a case which had been X-rayed for ringworm. Previously to the ringworm the hair, which was very fair, had been quite glossy. The regrowth after X-ray depilation (Sabouraud pastille dose) was noticed to be dull and dusty-looking, and on close inspection it was seen to be "ringed" in alternate white and opaque, and golden and translucent rings. The specimen showed that the opaque rings, as in other cases of ringed hair, were due to spindles of air in the shaft arranged at intervals, the spindles appearing black by transmitted light and white by reflected light.

Dr. J. L. Bunch showed pure cultures of streptococci and slides from two cases of pemphigus of Dr. Crocker's. The cultures were grown directly on sloped agar, were pure, and showed typical chains of streptococci giving the usual staining and cultural reactions.

Dr. Colcott Fox showed *a case for diagnosis*, with a suggestion that blastomycosis was present. The case had not, however, been worked out, and notes of it would be presented later.

Dr. Wilfred Fox showed (1) a woman, aged 29 years, with a patch of *morphœa* situated on the skin over the outer and lower segment of the right breast. She first noticed it at the beginning of July of this year, when it appeared as a tender lump accompanied by neuralgic radiating pains. She came to the hospital in September, when the condition was seen to consist of a localised erythematous patch, slightly scaly, with an underlying induration, which seemed to be deeper than the skin, and a very obvious enlarged and tender gland on the outer border of the pectoralis major muscle. Mr. Lawrence Jones (whose case it was, and to whom he was indebted), however, diagnosed sclerodermia, and the present condition is typical of that disease, the patch being quite white and smooth with a very faint reddish border showing a few dilated venules; the induration was now limited to the skin alone. The lesion was still painful and only comfortable when supported with a bandage. There were no other patches anywhere on the body.

(2) A man, aged 32 years, with *sclerodermia* of both legs from the knee to the ankle, symmetrical patches about four inches in diameter on the outer side of each thigh about the centre, and on the extensor surfaces of both forearms, continuing on to the dorsum of the hands. The disease appeared first on the legs about four months ago, when the patient noticed that his legs used to swell after standing. He was a cricket professional and had always led an active and healthy life; there was no chill at the onset, and he could ascribe no cause. He came to the hospital in September, when the legs alone were affected, showing simply a brawny œdema; he was seen again during the intermediate stage, when the condition was becoming partly atrophic, although still œdematous in places. Later, he was referred to the skin-department, when he was found to be in the condition shown at present, with the skin completely atrophic, hard and leathery, and pale yellow in colour. There was also marked cyanosis of the dorsum of the feet from the constriction of the veins above. The patches on the arms had only appeared during the last three weeks. There was some limitation of movement of both ankle-joints and of the fingers of the right hand. There were no patches on the face or on the trunk. The remarkable points about the case were the appearance of the primary patches on the lower limbs and the intense itching of which he complained in the legs.

Dr. J. M. H. MacLeod showed a *case of Erythema induratum* associated with Lupus erythematosus. The patient was a somewhat delicate-looking woman, aged 27 years, who led the sedentary life of a dressmaker. Her parents were both alive and healthy. She was the sixth child in a family of eight, and the others enjoyed good health, there being no history of tuberculosis in the family. Till four years ago she had enjoyed fair health, but had suffered, as long as she could remember, from a weak peripheral circulation, which manifested itself in cyanosed and clammy hands, cold feet, and a marked tendency to chilblains. Four years ago Bazin's disease had developed on her legs, and the characteristic lesions of that affection had kept coming and going ever since then. At the time of exhibition a number of lesions in various stages of evolution, from deep-seated nodules to depressed pigmented scars, were noted on the calves of both legs. In addition to the lesions on the legs there was on the face an actively spreading eruption of Lupus erythematosus. Patches of this affection were present around the eyes, on both cheeks near the angles of the jaws, and on the sides of the neck. The lesions on the neck were recent, and presented a wavy, raised border. The fingers were also affected, especially those of the left hand, where there were severe, persistent, congested patches, of a purplish tint, and a number of small, white, atrophic scars. The case was of special interest owing to the association of the two affections, and the exhibitor hoped to publish a more detailed report of it in a subsequent issue of the journal.

Dr. Ormerod showed a girl, aged 12½ years, in good general health, with an eruption distributed over the upper part of the right chest and neck, and also the left supra-clavicular region. The total duration was about two years, and during that time it had appeared in crops at intervals. It consisted of small, raised, greyish crusts, about a quarter of an inch in diameter. These crusts separated and left a little pitted scar. The spots were discrete and nowhere confluent; there was no sign of inflammation about them; no earlier stage than that of the crust had been observed.

While under observation she had had an intercurrent attack of Herpes zoster on the left side of the chest and a mild eczema of one ear and of the fingers, but there appeared to be accidental complications.

Sundry suggestions were made, such as morphœa, Lichen planus, Acne varioliformis, Darier's disease, but no diagnosis was definitely decided upon.

Dr. Radcliffe-Crocker showed a *case of secondary syphilis* which had been sent to him for diagnosis. The eruption consisted of broad pustules, some of them compound, on the face, the right palm, and the left wrist. The exhibitor considered them due to iodide of potassium, an opinion at which several of the members of the Society arrived independently. The lesions had existed for several months, but the patient had had specific treatment all the time.

SEVENTY-FOURTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, HELD AT TORONTO, CANADA.

Report of the Proceedings of the Dermatological Section.

By J. C. RANKIN, M.D.

The first meeting of the Dermatological Section of the British Medical Association Annual Meeting at Toronto was held on Wednesday, August 22nd, 1906, Dr. Norman Walker, the President, being in the Chair. The attendance was good, but English dermatologists were not well represented. Many distinguished Americans, however, were present. The President, after thanking the profession for the honour of being asked to preside, and after welcoming the visitors, took for the subject of his address "The Position of Dermatology in the Medical Curriculum." He considered the present system of specialising resulted in much better teaching than formerly, but that the time given to the subject was still too short. He believed in the value of a definite course of lectures on dermatology, and suggested the summer of the fifth year as the best time for it. He considered that the subject should occupy a regular place in the curriculum, but that the special examination upon it might be dispensed with, and that a certificate on the Edinburgh plan might take its place. In his opinion the "quiz" classes of the Americans were very profitable to the student.

The subject was then declared open for discussion.

Dr. J. C. Johnston (New York) objected that the President was too discursive, and would have liked more precise information. He considered that the student best remembered those cases which he had met face to face with his instructor.

Dr. Gilchrist (Baltimore) believed in training the student to use his own common sense and reasoning powers.

Dr. Fox (New York) advised the teaching of diagnosis, leaving dermatological therapeutics to a later date, and insisted on the importance of teachin the student to cultivate his powers of observation.

Dr. J. Nevins Hyde (Chicago) read a paper on the "Influence of Light-Hunger on the Production of Psoriasis." He gave statistics as to the frequency of psoriasis in America. Psoriasis was chiefly confined to the covered part of the body, as if the disease were an expression of resentment on the part of the skin against exclusion of light; this was suggested by the fact that the disease is never met with in animals, whose bodies are rarely artificially protected from the light. If the hypothesis be correct, the condition should prevail most in northern countries, and the most satisfactory treatment should be exposure to light of the regions chiefly involved. Considerable discussion followed.

Dr. Duhring (Philadelphia) did not accept the suggested theory. He believed in internal treatment, discouraged X-rays, and concluded that if there is a disease of the skin which is not parasitic, it is psoriasis.

Dr. Bulkley (New York) referred to the metabolic theory of the causation.

Dr. Ross (Halifax) mentioned cases apparently supporting Dr. Hyde's views.

Dr. Fox (New York) drew attention to the freedom of the negro from psoriasis.

Dr. Corlett (Cleveland) stated that he had not seen a case in the coloured skin of dark races.

Dr. Gilchrist (Baltimore) believed that the parasitic theory had not yet been disposed of.

The President then commented on the diversity of opinion on the subject, and Dr. Hyde replied to the various criticisms.

Dr. J. C. Johnston (New York) read a paper on "The Evidence in Favour of an Autotoxic Factor in the Production of Bullous Eruptions." He mentioned the similarity in the general configuration of such diseases as prurigo, pemphigus and Erythema herpetiforme. The work done on the nitrogenous elimination had not yielded any noteworthy results, excepting in finding that indican-urea was practically constant. This, with the eosinophilia associated, suggested a toxic origin. He considered that the effects of an eliminative line of treatment supported his contention.

Dr. Bulkley agreed with Dr. Johnston. He had seen cases in immigrants due to intestinal disorders.

Dr. Gilchrist considered the question one of defective elimination.

Dr. Duhring supported an internal cause and regarded external treatment as merely palliative.

Dr. Johnston then replied.

Dr. J. A. Fordyce (New York) gave an interesting lantern demonstration of cases of skin-disease, including many interesting photo-micrographs.

On Thursday:

Dr. Graham Chambers gave a clinical demonstration of cases of ringworm, Pityriasis rubra, and Molluscum fibrosum.

Drs. Hyde and Corlett showed a series of interesting photographs.

Dr. A. R. Robinson (New York) read a paper on some "Errors in the Treatment of Cutaneous Cancer." He considered that the treatment differed according to the extent, situation, and variety of the disease. Small lesions should be excised. Where too great deformity would follow, scraping with the application of caustics or X-rays was indicated. The speaker detailed cases suitable for different kinds

of treatment. He pointed out the diagnostic value of caustic potash in picking out malignant nodules.

The PRESIDENT remarked on the frequency of poor results following excision. He considered that chromic acid was a very useful caustic, and not so painful as others.

Dr. SHERWELL recommended the use of arsenic as having an inhibitory effect on the cancerous diathesis.

Dr. FOX thought the curette or dental burr of great service.

Dr. HYDE had seen no beneficial results from internal treatment.

Dr. BULKLEY stated that alcohol should be prohibited in all cases of epithelio-mata, and that vegetarian diet ought to be taken.

Dr. CORLETT used electrolysis.

Dr. GILCHRIST thought X-rays of undoubted value, but that excision ought to be done if possible.

Dr. R. W. TAYLOR (New York) read a paper on the "Evolution of Intra-primary Prodromal Syphilides." He mentioned a number of cases of multiple chancres. He considered that slight traumatism might cause specific lesions, as he believed the poison to be at once absorbed and diffused by the blood.

Dr. GILCHRIST (Baltimore) read clinical notes on a case of "Pityriasis Rubra proceeding to Gangrene" of one finger of the right hand and the whole of the left foot. Examinations of the blood, urine, etc., had been entirely negative in giving any clue as to the causation of the disease.

Dr. CORLETT (Cleveland) read a paper on "Dermatitis Vegetans," showing photographs of a case. He discussed the etiology of the condition.

Dr. WENDE (Buffalo) commented on the case. He had seen five cases of the disease.

On Friday 24th:

A demonstration of cases was given, including one of Pemphigus foliaceus of four years' duration, and another case of Mycosis fungoides or Pemphigus vegetans was shown, most of the members diagnosing the latter.

Dr. BULKLEY read a paper on the "Wrong and Right Use of Milk in Skin Diseases." Milk being a natural food ought to be suitable to all people. Laboratory theories probably need modification. He believed milk to be capable of direct absorption without undergoing the processes of caseation and digestion. Milk should be administered at the time of alkaline digestion, and away from the time of taking other food. So given, milk was of value in acne, eczema, etc., when otherwise it would not be well borne.

Dr. GRAHAM CHAMBERS (Toronto) opened a discussion on the etiology of eczema. He reviewed the various opinions on the question, and discussed the views held by Dr. Hall, of Sheffield, with regard to infantile eczema. The speaker considered the disorder to be one due to malnutrition.

The PRESIDENT after citing the tendency to be led away by single ideas, laid stress upon the importance of external irritation in causing dermatitis and mentioned Primula obconica as a causative factor.

Dr. BULKLEY supported Dr. Chambers' view of an internal cause.

Dr. DUHRING considered that the term "eczema" was used much too loosely, and would distinguish between eczema and dermatitis.

Dr. SHERWELL believed in the constitutional nature of the disorder.

Dr. RANKIN (Belfast) read a paper on "The Blood in Skin Diseases." He had, in conjunction with Dr. T. Houston, used Wright's methods, and believed that they gave clear and definite information which enabled treatment to be carried out on scientific lines. He mentioned cases of acne, lupus, etc., where the opsonic method was used, and also spoke of coagulability and alkalinity measurements.

The PRESIDENT, Dr. GILCHRIST, and Dr. DUHRING spoke on the subject, after which the proceedings of the section terminated.

CURRENT LITERATURE.

THE CLASSIFICATION OF BULLOUS DISEASES. (*The Journ. Cut. Dis., including Syph.*, March, 1906.)

IN his introduction to a discussion at the American Dermatological Association meeting, December, 1905, J. T. Bowen confined himself to enumerating the various classes it was at present possible to distinguish. Some progress had been made by separating from the old group *Pemphigus* bullous eruptions of traumatic causation and those occurring as a stage of some well-defined dermatitis. He would separate also the following provisional groups:

(1) *Acute infectious bullous dermatitis*, or so-called pemphigus, a grave malady almost entirely observed in butchers or people handling animals or animal products, and almost always starting from an infected wound. Bowen reserves for further consideration the identity of a epizootic of foot and mouth disease, and an epidemic of acute bullous dermatitis following vaccination, which he observed. Acute pemphigus of infants is a form of Impetigo contagiosa.

(2) *Chronic hereditary bullous dermatitis* (Epidermolysis bullosa hereditaria), both with and without the formation of epidermic cysts.

(3) *The vegetating bullous dermatitis, described as Pemphigus vegetans* (*Neumann*), characterised by the special localisation of the lesions, their papillomatous character, the progressive fatal course.

(4) *The bullous dermatitis known as Pemphigus foliaceus*, though not so sharply defined, yet separable by the fact of early rupture of the bullæ, the assumption clinically of many of the features of exfoliative dermatitis, and the progressive course, with usually fatal ending.

(5) *Dermatitis herpetiformis* (Duhring), a group, with somewhat ill-defined boundaries, of cases of vesicular and bullous eruptions, with the following peculiarities in order of importance, viz. recurrence in more or less isolated attacks, a marked tendency to grouping ("herpetiformity"), preservation of good general health, multiformity of eruption (erythema, papules, pustules, alone or in combination, or with bullæ, marked subjective symptoms. Hydroa puerorum (Unna) probably has no place here.

(6) *Chronic pemphigus*, characterised by more or less constant recurrence of pure bullæ, without signs of multiformity, but with a certain symmetry and frequent implication of mucous membranes.

E. B. Bronson prefaced his introduction by affirming that a degree of acantholysis, *i. e.* a special process or change in the rate whereby the cohesion

of the cells is weakened, is a condition precedent to all bullous eruptions, except the purely obstructive forms, such as sudamina, dysidrosis, and lymphangioma circumscriptum. This acantholysis varies in degree, is marked in Impetigo contagiosa and pemphigus, especially P. foliaceus, but less in zoster. It is often an epiphenomenon in the course of certain special types of cutaneous inflammation, such as Erythema multiforme, Lichen planus, and eczema, where the bulla-formation is not merely due to the intensity of the inflammation or to the amount of serous effusion, but also to the acantholysis. Epidermolysis bullosa is a condition approaching nearest to a state of acantholysis independent of various exciting conditions. The source of the injury that gives rise to acantholysis may be—(1) *extra-cutaneous*, from traumatism, extreme changes of temperature, or acrid or venomous substances; (2) *intra-cutaneous*, as an incidental effect of many cutaneous diseases, including streptococcic and staphylococcic infections; (3) *infra-cutaneous*, derived, perhaps, from the blood-current, or more probably of neuropathic origin, direct or reflex.

Herpetiformity, rather than mere vesication or vesiculation, is the paramount feature of *D. herpetiformis*, and includes the general form of the lesions, their peculiar mode of occurrence, their grouping and arrangement, and in this sense it is met with also in the eruption of the general infective diseases. Bullæ are exceptional, and only one of the multifarious efflorescences, but may be predominant. The internal pathology is unknown. The term *pemphigus*, on the other hand, is to be applied to a residuum of non-infective bullous eruptions, recognisable clinically, due to some definite internal disorder. There is little or no inflammation, and herpetiformity is far less pronounced. Also there is evidence of more profound derangement of the cutaneous vitality, as well as to some much graver internal disorder.

A study of the etiology of bullous eruptions is necessary, because a classification on purely clinical grounds might easily lead us astray.

In the discussion, J. C. Johnston said that when intermediate cases were considered it was impossible to draw any distinct line, clinically and pathologically, between Epidermolysis bullosa, pemphigus, Dermatitis herpetiformis, and pompholyx. He thought them all autotoxic in causation, the toxins probably originating in the digestive apparatus. The constitutional prodromata, the subsequent depression, and the eosinophilia pointed to a systemic intoxication, which might sometimes, perhaps, bring about nerve-degenerations. Failure of elimination in the quantity of urea was to be noted twenty-four to thirty-six hours before the outbreak of eruption. He thought the acantholysis secondary, the result of the action of cytolytic serum of toxic origin. Bullæ were formed by the amount of serum and rapidity of its effusion. Louis A. Duhring considered it best to hold fast to our clinical interpretation entirely irrespective of the etiology. Pemphigus, as portrayed by Hebra, should be retained, notwithstanding aberrant forms occurred. He thought D. herpetiformis was pretty clearly defined, and the bullous variety was characterised by a certain amount of differentiating inflammatory reaction. The systemic depression, of varying degree, always present in true pemphigus is absent in D. herpetiformis, except in grave cases. The term "herpetiform" included the grouped type seen in zoster and the peripherally-extending form seen in vesicular Tinea circinata. Hartzell held that the mere fact that bullæ showed a certain arrangement did not indicate that the case was one of D. herpetiformis rather than pemphigus, but A. Ravogli

opposed this view, and considered bullæ were only an epiphenomenon in the former affection. J. N. Hyde mentioned that he had lately seen a number of cases of *Hydroa puerorum*, in one of which lesions were excited on the cornea by exposure to sunlight even in winter. J. F. Schamberg pointed out that a varying origin of the possible causative toxins in various bullous eruptions would not serve to break up the group. Stelwagon always rather regretted Duhring had not used the term "pemphigus" instead of "Dermatitis herpetiformis." He referred to Weidenfeld's observation that in the acute evolution stage of bullous disease slight traumatism would evoke a bleb, though not in involution stages. W. A. Pusey remarked that however probable the toxic origin might be it could not apply to the entire group of bullous eruptions. He therefore protested against the substitution of the toxic theory for the equally convenient and indefinite tropho-neurotic theory. An experience unique to him was his failure in a case of D. herpetiformis to produce reaction of the skin upon very vigorous rubbing. Baum found indican always present in the urine in D. herpetiformis, which suggested metabolic difficulties. Charles J. White related that in one case of D. herpetiformis they constantly observed a marked leucocytosis preceding fever and the eruption by about twenty-four hours.

T. C. F.

TWO CASES OF MULTIPLE TUMOURS OF THE SKIN IN NEGROES ASSOCIATED WITH ITCHING. Jay F. Schamberg and Rose Hirschler. (*Journ. Cut. Dis.*, April, 1906, illustrated.)

Case 1.—A coloured woman, aged 40 years, with albuminuria and hyaline and granular casts, presented an eruption of about fourteen years' duration. The lesions came out in about two weeks, with great itching, and have persisted with varying irritation. The lesions are isolated, firm, slightly elevated nodules, from a pea to a small finger-nail in size, of a blackish colour, contrasting with the brown integument, painless on pressure. The smaller are smooth, the larger covered with a horny epidermis. There are about sixty on each arm, and about six on the dorsal surfaces of the hands and fingers. The palms are free. On the back are about a score; on the legs about twelve, some the size of the thumb-nail. The toes and soles are free.

Case 2.—A coloured woman, aged 25 years, with a history of an outburst of the eruption with itching about fifteen years previously, with persistence and itching since. The nodules are sharply circumscribed, discrete, perfectly round, varying in size from a small pea to a hazel-nut in size, smooth at first, and gradually acquiring a thickened horny centre with sharp edges. About fifty nodules are distributed over each lower extremity, especially over the dorsum of the feet, front of knees, and thighs. There are a few on the soles. On the upper extremities are about seventy all told, mostly below the elbows. On the palms there is one lesion on a hypothenar eminence. There are none on the face, neck, and trunk.

Histology.—The authors made three biopsies, and sum up the sequence of changes as follows: Dilatation of the cutaneous blood-vessels; cell infiltration chiefly in sharply circumscribed masses; proliferation of the fixed connective-tissue elements; formation of new collagenous fibres. In the largest and presumably the oldest tumours there is more pronounced vascular dilatation, and as a result thereof an enormous overgrowth of the horny layer of the epidermis, a special feature is the great abundance of mast-cells present.

The authors identify their cases with one described by W. A. Hardaway (*Archives of Dermatology*, April, 1880) in a white woman.

T. C. F.

ON THE TECHNIQUE OF THE FINSEN TREATMENT. Eschweiler. (*Derm. Centralb.*, January, 1906.)

One of the difficulties associated with the Finsen treatment is that of keeping the compressor evenly fixed on the illuminated area. The writer considers that a continuous firm pressure cannot be exerted by the hand, and when the pressure is released blood flows into the compressed part. Elastic bands are not always applicable, as when the disease is on the tip of the nose, and are often unpleasant owing to the tight strapping of the patient. In order to obviate these difficulties Dr. Eschweiler has invented a simple holder which can be fastened on any part and exerts an equalised and regular compression. This consists of an upright bar to which a cross-piece can be tightly screwed. The latter carries at its further end a short, movable extension, on which runs a clamp for the reception of the pressure-glass. The pressure is regulated by a spiral spring, worked by a thumb-screw, between the cross-bar and the extension-piece. A suitable support is fitted to prevent movement of the head. Even fixation on the tip of the nose is quite easy by means of this device, and after using it regularly for two months the writer is well pleased with the service it has rendered him. The apparatus can be obtained from the firm of Lütgenau & Co., of Düsseldorf.

S. E. D.

ON PITYRIASIS RUBRA PILARIS. HISTOPATHOLOGICAL EXAMINATION ESPECIALLY OF THE CUTANEOUS NERVOUS SYSTEM. C. Vignolo-Lutati. (*Archiv f. Derm. u. Syph.*, April, 1906, p. 273.)

After a critical survey of the literature on Pityriasis rubra pilaris since Devergie first described it in 1857, the writer describes a typical case which occurred in his practice at Turin, the patient being a man, aged 46 years. With his consent pieces of tissue were removed from the dorsal surface of the hand and the side of the knee for histological purposes, and these were specially fixed and the sections stained to demonstrate the cutaneous nerve-endings. A microscopical examination of a large number of sections showed: (1) the typical hyperkeratosis of the funnel of the hair-follicle forming the horny plug; (2) slight inflammatory changes involving the papillary and sub-papillary layers of the corium; and (3) an atrophic sclerosis of the Meissner's bodies and of the nervi communicantes of the skin. The writer regards the inflammatory changes in the corium as secondary to the hyperkeratosis, and believes that the disturbance of cornification is due to a toxic neuritis which leads to the atrophic sclerosis of the nerves and their endings.

J. M. H. M.

A CASE OF ARTIFICIAL ACUTE NEPHRITIS FOLLOWING THE USE OF BALSAM OF PERU. Dr. Adolf Richartz. (*Munch. med. Wochenschr.*, May 8th, 1906, p. 909.)

The patient, aged 16 years, suffered from scabies and secondary eczema for which a 10 per cent. ointment of balsam of Peru was used. It is uncertain how

many applications were made, possibly three; but the patient soon after showed symptoms of nephritis, and died comatose fourteen days from the commencement of the treatment.

CONTRIBUTION ON THE QUESTION OF THE SKIN-CHANGES IN PSEUDO-LEUKÆMIA.

P. Linser. (*Archiv f. Derm. u. Syph.*, May, 1906, p. 3.)

This contribution is based on the study of two cases of pseudo-leukæmia which were under the observation of the writer at the medical clinic at Tübingen in 1899 and 1903, and which both ended fatally.

Case 1 was that of a male, aged 54 years, who was under the care of the writer from April to July, 1899, when he died. The patient presented swellings of the cheek, side of neck, breast, and arm. The skin of the arm was also much thickened like elephantiasis. The axillary and inguinal glands were enlarged, as were also the liver and spleen, the latter organ being easily palpable below the costal margin. A histological examination of a piece of skin from one of the tumours showed the presence of a dense infiltration of double round cells in the subcutaneous tissue and the corium, which were somewhat indefinite in character, but were believed to be lymphocytes. The patient's blood was examined from time to time, and revealed an increase in the number of leucocytes and a marked relative increase in the lymphocytes. The patient had a severe attack of pneumonia from which he recovered, but two months later he succumbed. During the pneumonia the skin-lesions diminished in size, but increased again with convalescence; on the other hand, the number of leucocytes went up from 9100 to 21,800, and the proportion of lymphocytes increased 45 to 67 per cent.

Case 2 was a man, aged 58 years, who first came under the observation of the writer in the summer of 1903 suffering from an exfoliative dermatitis affecting almost the whole of the skin. This dermatitis began with œdema, which subsided, leaving a scaly erythrodermia and a definite infiltration of the skin. The redness was almost universal, and was only absent on the palms and soles, where the scales were exceptionally thick. The superficial glands and the liver were enlarged and the spleen could be felt. The blood contained, on one occasion, 11,800 leucocytes, and the percentage of lymphocytes varied from 37 to 90. This patient also had an attack of pneumonia and, later, of acute bronchitis. As in the former case, the infiltration of the skin and the swelling of the gland diminished during the fever of the pneumonia, while the leucocytes and percentage of lymphocytes increased. The infiltration in the skin was regarded by the writer as consisting of lymphocytes, which he considered left the skin and were taken up by the blood so long as the intercurrent acute febrile attack lasted and returned to the skin when the temperature became normal.

J. M. H. M.

MULTIPLE TELANGIECTASES OF THE SKIN AND MUCOUS MEMBRANES OF THE NOSE AND MOUTH.

A. Brown Kelly. (*Glasgow Med. Journ.*, June, 1906, p. 411.)

In this paper the writer describes and comments upon two cases of a peculiar telangiectatic affection of which only a few cases have been recorded. In Case 1 the patient, a woman aged 41 years, was seen by the writer in May, 1898, on account of

epistaxis. This had begun in girlhood, diminished when menstruation set in, and also after her marriage, at the age of 24. Five years later her husband died and the epistaxis became more frequent and "red spots" began to appear on the face. She died ultimately of syncope following a prolonged period of profuse epistaxis, seven years after she came under the observation of the writer. Every year from October to March the patient was unable to leave the house and was occasionally confined to bed owing to weakness resulting from repeated hæmorrhages. The red spots began to appear at the age of 29 years, and were first noticed on the cheeks, then on the ears, upper lip, and finger-tips. These lesions were grouped and consisted of telangiectases. The larger ones had a diameter of 3 mm. and were purplish in colour. Telangiectases were also present in the nasal mucosa, and there were three or four small spots about the middle of the tongue. Case 2 was that of a younger sister of the above, and had a similar history except that the issue was not fatal. The red spots first appeared on the chin, close to the lower lip, in her twenty-seventh year, and on the cheeks and fingers at thirty-five. A few also appeared on the scalp, and bled when the hair was combed. A specially large telangiectasis was situated on the tip of the tongue. From these lesions on the tongue and lips bleeding took place, less often and in smaller quantities from the nose, and only in consequence of injury from telangiectases of the skin. In both cases bleeding from ordinary cuts was not greater than usual and was easily checked, and there was no hæmophilia. Chloride of calcium was administered without any appreciable influence on the telangiectases.

The best description of this peculiar affection is in a paper by Osler in which he described three cases (*Bull. Johns Hopkins Hosp.*, 1901, p. 333), and cases have also been recorded by Hawthorne, Legg, and Chiari, amounting in all to ten cases. One of the striking characteristics of the affection as shown by the cases was its tendency to affect several members of one family. The hæmorrhages seemed to observe no periodicity and were brought on by the slightest injury—blowing of the nose, stooping, etc., and often there was no assignable cause, and they might come on when the patient was asleep. There was no constitutional defect in any of the patients to account for the trouble, and when examined the organs had invariably proved healthy, nor did an examination of the blood shed any light on the subject.

Various means of stopping the bleeding have been tried but with varying success, such as plugging, the application of a powder containing antipyrin 50 grs., tannin 1 gr., and sugar 10 grs., and cauterisation.

J. M. H. M.

CONTRIBUTION TO THE KNOWLEDGE OF SYMMETRICAL NÆVI OF THE FACE. J. Osillag. (*Archiv f. Derm. u. Syph.*, May, 1906, p. 37.)

Under the heading of "Symmetrical Nævi of the Face," Hallopeau and Leredde grouped a series of small growths on the face which appeared either at birth, during infancy, or before puberty, and which were regularly distributed in certain situations on the face, such as the bridge of the nose, the alæ nasi, the naso-labial folds, the skin of the lip, and the forehead. These varied in colour from that of the healthy skin to yellow or red, and were in some cases soft while in others they were as hard as cartilage. In this group various conditions which

differ in their histological structure have been placed—such, for example, as (1) Epithelioma adenoides cysticum (Brooke) or the Tricho-epithelioma multiplex papulosum (Jarisch); (2) Adenoma sebaceum (Caspary, Pringle); (3) Perry's case of sweat-gland tumours on the face, and (4) the type of case described first by Darier under the title of "Nævi vasculaires et verruqueux du visage," composed of dilated and increased capillaries and a rich cell-infiltration in the connective-tissue matrix. A case which belonged to the last variety, which occurred in the clinic of Professor Róna at Budapest, forms the basis of this contribution. The patient was a woman, aged 28 years, who presented about the nose and chin a number of small tumours which had been noticed since childhood. The lesions were discrete, flat, or rounded in shape, and were the colour of the skin or red from the presence of capillaries on the surface. On the forehead a small soft nævus was present, and there were several fibromata about the neck. A histological examination showed numerous dilated capillaries and a dense cellular infiltration in the corium.

[The case appears to be a case of what we call by the unfortunate name "Adenoma sebaceum." The writer of the paper suggests a new name for the affection, namely "Nævi symmetrici fibro-angiomatosi," which, though cumbersome, is more appropriate.]

J. M. H. M.

ECZEMA OF THE LIPS AND ITS RELATION TO MOUTH-WASHES AND DENTIFRICES. Galewsky. (*Münch. med. Wochenschr.*, July 10th, 1906, p. 1360.)

Neisser in the year 1898 and again in 1902 drew attention to this type of eczema, and ascribed it to the use of various mouth-washes and dentifrices. He showed that a cure at once resulted when the use of these was discontinued, and was inclined to ascribe the unpleasant result to the essential oil so frequently used in these preparations, notably Ol. menth. pip. and Ol. caryophyll.

The author gives his experience of sixteen cases of this affection. He quotes the analyses of the various preparations in use by his cases, and mentions instances in which the mere removal of Ol. menth. pip. from the preparations has resulted in immediate healing. He is inclined to think that some other ingredients are also harmful—*e.g.* formaldehyde, tincture of arnica, salol.

W. B. W.

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ON CUTANEOUS AFFECTIONS IN VARIOUS DISEASES, WITH ESPECIAL REFERENCE TO CERTAIN ANGIO-NEUROSES.*

By S. ERNEST DORE, M.A., M.D.Cantab.

(*Continued from page* 397.)

Infective Diseases.

Finally the group of infective diseases calls for consideration on account of the adventitious rashes which occasionally occur in connection with some of them.

The eruptions are presumably toxic in nature, and for the most part conform to the type of efflorescence which seems to be characteristic of toxic substances circulating in the blood. This type has erythema for its basis, and may take the form of punctæ and macules, of papules, wheals, or hæmorrhages. Clinically, the rashes are usually described as scarlatiniform, morbilliform, and urticarial, but this nomenclature is somewhat misleading, as the eruptions have not the constant characters and course of those attending the specific fevers. Probably they are all or nearly all variants of the same erythematous process. In the case of eruptions of nervous origin Crocker has pointed out that precisely similar lesions in a nerve-centre may in different individuals or in the same person at different times produce widely different effects on the skin, and still more often produce none at all. Brocq came to a similar conclusion for drug eruptions, and formulated

* Thesis written for M.D. Degree, Cambridge.

the laws that (1) the same morbid cause acting on several subjects is able to produce entirely different eruptions; *e. g.* iodide of potassium may produce erythema in one subject, acne in another, purpura in a third, and so on; (2) the same eruptive phenomena may be produced by different causes—*e. g.* various drugs, poisonous foods, etc., all producing a typical urticaria. These laws might also be applied to the adventitious rashes occurring in the infective diseases; they probably represent the reaction of the skin to various indifferent toxic substances circulating in the blood, and differ essentially from the more or less constant lesions which occur in diseases of known external microbic origin, such as syphilis, tubercle, and other infective granulomata, or in the zymotic fevers. The rashes which form an integral part of the latter do not come within the scope of discussion of this paper, but they are probably the result of bacterial or protozoal toxins; and since bacilli have been found in the rose spots of typhoid fever, and the contagious element of variola and scarlatina appears to reside in the pustules and scabs of these diseases respectively, it is possible that the constant characters of the exanthemata are associated with the presence of special microorganisms situated in the skin itself. Of the infective fevers, using the term in its widest sense, eruptions may be associated with malaria, cerebro-spinal meningitis, acute rheumatism, infective endocarditis, and septicæmia and pyæmia.

Adventitious rashes may also occur in some of the zymotic fevers.

Malaria.—Brocq divides malarial cutaneous manifestations into two classes—(1) those which, on account of their occurrence with fever, or by their unusual course, may be regarded as merely complications of malaria; these may be quite unaffected by the administration of quinine. (It must be remembered that quinine itself may cause erythematous and urticarial eruptions.) (2) A class of rarely observed eruptions, which must be regarded as truly malarial. Among the first are herpes, urticaria, purpura, nodose erythema, etc. Instances of true malarial urticaria and true malarial herpes have been described by several observers. Brocq records a case which he includes in the second group, or "paludides" of an "eczematoid" patch on the left side of the nose of a woman, aged 40 years. It consisted of closely-placed papular vesicles on a reddened base. It presented a double tertian character—*i. e.* on alternate days it was severe and mild. The

patient, who had resided in a malarious district, had never had intermittent fever, but had suffered from regularly recurrent attacks of neuralgia and of pulmonary congestion, which had been controlled by quinine. She also had some enlargement of the spleen. From the time quinine was given the eruption at once disappeared, but returned when quinine was stopped, and again faded upon its resumption. According to Powell, an attack of herpes invariably marks the disappearance of an attack of malarial fever. He attributes urticaria to the drugs employed, although he never saw an eruption due to quinine. Except sudamina and prickly-heat—caused by excessive sweating—herpes and melanotic pigmentation (which may affect the tongue, gums, and palate) are the only skin-affections he attributes to malaria. Osler described a case of multiple gangrene and Billet one of intermittent Erythema scarlatiniforme in association with malarial fever. Tschuprin had a child under his care in whom symptoms of Purpura hæmorrhagica occurred soon after an attack of intermittent fever. The condition was cured by the exhibition of quinine, but there was a relapse. Riesman drew the following conclusions from his observations of skin-eruptions in malaria: (1) Skin-eruptions are not rare in malarial infection; (2) herpes and urticaria are the most frequent; (3) neither has any specific characters; (4) they may occur in any stage, the former usually in the febrile, the latter in the sweating, stage; (5) they may be of great value for diagnosis in obscure cases; (6) three types of urticaria may be recognised—that accompanying the febrile stage, that taking the place of the chill, and that replacing the entire paroxysm; these cannot be distinguished from each other or from other forms of the disease by their appearances; (7) in all cases of urticaria of obscure character the blood should be examined for plasmodia. Whether found or not, quinine is worthy of a trial.

Cerebro-spinal fever is accompanied by a petechial rash, herpes, erythema or dusky mottling, or rose-coloured spots like those of typhoid fever. Urticaria, Erythema nodosum, ecthyma, pemphigus, and, in rare instances, gangrene of the skin have also been noted. Osler found an eruption present in thirteen of twenty-one cases during an epidemic in Baltimore. Herpes was the most common. In four there was a diffuse erythema about the chest and abdomen. Petechiæ were seen in eight, but extensively in only three. In three cases a rash occurred

in the neighbourhood of the joints, particularly over the extensor surfaces of the knees and elbows and about the ankles. It consisted of a diffuse, livid erythema of great intensity, on which a purpuric herpes developed. As the erythema faded the vesicles dried, and could be felt as little nodular hemispherical bodies which persisted for a week or ten days.

The rashes which may accompany *acute rheumatism* are sudamina, purpura—with or without urticaria—and various forms of erythema. The relationship of many of the erythemata, such as Erythema nodosum and multiforme to rheumatism is still under discussion, but the latter is generally recognised as at least one of the causes of these eruptions. According to Crocker acute rheumatism may also precede or accompany scleroderma, and subcutaneous nodules of the same nature as rheumatic nodules have been observed. Stelwagon thinks that the rheumatic origin of this disease is supported by the frequent occurrence of rheumatic symptoms, either concurrent or antedating the sclerodermic changes. In a case seen by Brissaud scleroderma was preceded by a peculiar form of articular rheumatism, the first attack of which was accompanied by Erythema nodosum.

Infective endocarditis gives rise to erythematous and petechial rashes, and the same are seen in *septicæmia* and *pyæmia*.

Septic rashes sometimes occur in association with *severe burns* and in *tonsillitis*, and *gonorrhœa* is said to be accompanied by erythematous eruptions. Erythema or urticaria may occur in *cholera* and hæmorrhagic rashes have been described.

The prodromal, diffuse, and macular erythematous and hæmorrhagic eruptions of *variola* are well known, and various secondary pyogenic eruptions have been described by Schamberg. Urticaria is also occasionally seen. Prodromal rashes have been recorded in measles by J. D. Rolleston and Adkins, and in varicella by Guinon.

In *influenza* morbilliform, scarlatiniform, urticarial, and herpetic rashes occur (Schwimmer, Herman), and were met with by Barthélemy in fourteen out of 219 cases.

Attention has recently been drawn to the scarlatiniform erythema of influenza by Hamilton.

In *typhoid fever* erythema, urticaria, sudaminal eruptions, and rarely herpes have been seen, in addition to the usual rose-coloured spots. Bosanquet noticed erythematous, morbilliform and scarlatini-

form rashes in eighteen out of two hundred and fifteen cases, and da Costa observed similar eruptions, including mottling of the skin, in nine patients. The pale blue spots, or "taches bleuatres," are now known to be due to pediculi. An anomalous superficial dermatitis occurring during typhoid fever, and having some resemblance to Psoriasis rupioides, was reported by Rolleston and Mercer. The occurrence of atrophic striæ on the skin of the abdomen, thighs, and knees after typhoid fever has been noticed by several observers, and two instances have recently been described by Bunch. Boils constitute a common and troublesome sequel of the disease, and appear to be more frequent after hydrotherapy (Osler). Œdema of the skin and bed-sores also occur.

Eruptions of various kinds have been described in connection with certain *tropical diseases*. *Dengue*, for instance, is characterised by an initial erythematous and a terminal polymorphous eruption.

Beri-beri may be accompanied by some rare forms of erythematous rashes (Manson).

In two cases of *trypanosomiasis* reported by Manson and Daniels there were characteristic cutaneous manifestations. A slight general œdema of the skin was present, and this was followed by the development of a circinate erythema, leaving pigmentation distinct from the usual types of Erythema multiforme. A peculiar irritable papulo-vesicular eruption was noted in the cases of "sleeping sickness" in Congo negroes who died of the disease in Charing Cross Hospital (Galloway).

Boils, carbuncles, or rather gangrene of the true skin and subcutaneous hæmorrhages, have been seen in plague (Powell).

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THE OPSONIC TREATMENT OF CERTAIN DISEASES OF THE SKIN.

By GEORGE PERNET and J. LEMARE BUNCH.

(*Continued from page* 401.)

Bullous Eruption.

Case 6.—John P—, aged 57 years (No. 443, 1905). In this case the patient, who came under observation first in May, 1905, had been suffering from recurrent crops of bullæ about the lower part of the right leg, the scalp, and also to a less extent on the body.

The right leg was in a very unhealthy condition, with two unhealthy

sinuses discharging pus. This was dealt with in the hospital by free incisions and disinfection, but notwithstanding these measures the bullæ still continued.

He became an out-patient and was put on Liq. arsenicalis, salicin, and local applications without any marked benefit as far as the eruptive elements were concerned.

The bullæ were thought to be the result of local infection. A culture from a recent bulla—twice at an interval of ten weeks—turned out to be pure streptococcus (Bunch), and was shown at a meeting of the Dermatological Society of London.

As the right big toe-nail was greatly hypertrophied and the nail-bed unhealthy, the nail was removed, one reason being that the patient stated that the bullæ which were wont to appear on the lower part of the left leg ceased when the left big toe-nail was shed.

Still the bullæ continued to appear on the right leg and on the scalp, the incisions not closing and continuing to discharge to some extent.

As there were plenty of staphylococci about the affected parts (secondary infection), and although streptococci had been found in a bulla, injections of anti-staphylococcal vaccine were begun on February 13th, 1906, commencing with $\frac{1}{2}$ c.c. (1250 million of staphylococci), together with a nascent sulphur lotion *in loco.* (leg). The lesions slowly improved, the bullæ becoming fewer in number, smaller, and occurring at greater intervals.

On July 10th, 1905, when a few bullæ were present, there had been no bullæ for a fortnight on the legs. The scalp had been free for two months, but on July 31st one small bulla appeared in this situation.

The patient had already been first an in-patient and then an out-patient at University College Hospital for a year before any vaccine injections were given him, but did not show much improvement during this time. On February 13th, 1906, his opsonic index to streptococci (on two occasions a pure streptococcus culture had been obtained from his bullæ) was ·79 and to staphylococci ·86, but clinically the secondary staphylococcus infection appeared to give rise to so much trouble that it was decided to commence with injections of mixed staphylococci.

His opsonic index to staphylococci was in six weeks improved to 1·05, and clinically his lesions seemed very much better.

Occasional bullæ still made their appearance on the legs, and the staphylococcus injections were continued up to the end of July, the improvement being on the whole very marked.

Then for two months no injections were given, but on September 25th it was decided to give him some injections of streptococcus as his index to streptococci remained low. He has now had four streptococcus injections, his index having been raised to ·98 on November 13th, and clinically he is better but still remains under treatment.

Case 7.—Robert Y—, aged 33 years. This was also a case of bullous eruption, but the history of the present attack was much shorter and the crops of bullæ were more localised. Two or three years before attending the hospital he had had some similar crops of "blisters" on his leg, and when first seen on September 28th he said that a fortnight before both legs had begun to feel irritable, and ten days previously some "blisters" appeared on the right leg below the knee, which burst and healed up. Bullæ continued to make their appearance on the right leg at intervals, and also on the left leg, but never on the sole of the foot. When first seen there were three vesicles on the dorsum of the right foot and one large bulla near the outer malleolus about 3 inches in diameter. There was no actual vesicle on the left foot, but slightly atrophic areas were present on both legs where bullæ had been.

Before attending the hospital he had been to the seaside for a time, as he thought the drains of his house were in bad order, but the change did him no good.

On September 28th cultivations were taken from two bullæ (Bunch) and pure cultures of streptococci were obtained and shown at a meeting of the Dermatological Society of London on October 10th. His opsonic index to streptococci was thus ·87, to staphylococci ·98. He was given an injection of 100 million streptococci subcutaneously in the forearm.

On October 5th, 12th, and 26th further injections of streptococcus vaccine prepared from his cultures were given, and on November 2nd his index had risen to 1·1. He had then no bullæ or vesicles and no injection was given.

On November 13th he had no bullæ or vesicles, and his index was 1·05. He was given an injection of 200 million streptococci. For the present, at any rate, he seemed to be cured.

Acne Vulgaris.

Case 8.—Frank R—, aged 24 years (No. 121, 1904). This patient was suffering from an obstinate Acne vulgaris of face and neck, with formation of large, boggy, purulent foci, which necessitated constant opening with the knife. He had been treated for the last ten to twelve years at various skin and general hospitals.

Treatment on general lines was started at University College Hospital on February 9th, 1904, but, although improvement took place, the disease was still very troublesome.

On January 23rd, 1905, antistaphylococcal vaccine injections were commenced, beginning with $\frac{1}{2}$ c.c. (mixed staphylococci), but the subsequent vaccine used was aureus, except on one occasion general treatment being continued. Slowly improvement took place, pustules and purulent foci becoming fewer and smaller. His opsonic index was at first ·63 to staphylococci, and this was gradually raised to above normal, but his general health remained poor, he was unable to take any holidays, and there seemed a possibility that his work as a plumber might induce the complication of lead-poisoning, although no signs of this were evident. In spite of more or less continuous treatment by vaccines, he has remained liable to occasional recurring swellings and pustules on his face and is still under treatment. His case is included here as being the most refractory case of acne treated by vaccines which we have encountered.

Gummatous Tuberculides.

Case 9.—In addition to the foregoing cases, the following notes relating to a young woman with gummatous tuberculides are very instructive as showing the benefit derived from injection of tuberculin. This patient had been lost sight of for some time, and it was not intended to include her case in this paper, as the upshot of treatment was not known to us. As she is again attending the hospital, we are able to say more about her and add these notes.*

* The patient was shown to the Dermatological Society of London on March 8th, 1905 (*Brit. Journ. Derm.*, xvii, 1905, p. 144).

Bridget C—, a well-grown and well-nourished, healthy-looking girl, aged 18 years, first came under observation on February 17th, 1905, when the following notes were made. The disease began at the age of seven, when a crop of lesions made their appearance. One of these occurred on the abdomen, near the right ilium, where a large scar, about 3 inches (about 7 centimetres) in diameter was present. This condition lasted for a few months. Then very few lesions appeared up to the age of fifteen, when they became more numerous and had gone on ever since without any interval of freedom. For three years the patient had been subject to flat, circumscribed infiltrations of the skin, varying from a shilling to a crown in size. These lesions all broke down more or less into superficial ulcers, which healed in from two to three weeks. On the legs and thighs up to the crest of the ilium there were a large number of more or less circular scars, varying in size, most of them about as large as half a crown (3 centimetres). On the thighs, however, some were over 2 inches in diameter (about 5 centimetres). On the right thigh near the knee there was a recent lesion (two weeks old), which was about 2½ inches by 1 inch (6 centimetres by 2 centimetres), dull red, with great thickening; it presented on its surface a pea-sized ulceration, which had formed within twenty-four hours of the time the patient was first seen.

A similar lesion, with a more advanced ulceration on the right calf, had been present three weeks. Below the left knee there was a flat infiltration, slightly raised and well defined, about the size of a shilling (about two centimetres). On the right temple there was a circular scar of ¼ inch, which had resulted from a similar lesion to those already described. The patient's lungs were unaffected, but the history was strongly tuberculous on the father's side, a large number of his relations having died of consumption, whilst some others were dying of the same disease at the present moment. The patient had lost one sister, aged 21 years, of phthisis, and a brother and another sister from "consumption of the bowels," whatever that may have been. She had already been an in-patient at one hospital for five months, and had also been under treatment elsewhere.

On March 14th, 1905, the opsonic content of her serum was examined and her opsonic index to tubercle found to be ·62.

On March 21st a fresh lesion the size of a lentil was found to have made its appearance on the outer side of the right thigh, also three

smaller ones on the left thigh which were just palpable. Her opsonic index was ·58; $\frac{1}{500}$ mgm. tuberculin T.R. was injected into the subcutaneous tissue of the right leg below the knee. Her temperature was then 99·4° F.

On March 22nd at 11 a.m. her temperature was 99·2° F. and opsonic index ·53.

On March 28th there was slight redness over the point of injection, and she complained of feeling "out of sorts." She was ordered to remain in bed. Her opsonic index was ·48. It was apparent that too large a dose of tuberculin had been given on a falling index. It was not, however, known at the time of injection that she was suffering from an auto-inoculation, as the blood was taken at the time of injection and only examined next day. Her index recovered only slowly, but on May 16th (nearly a month after injection) it had reached ·7. She had then twenty-six lesions and scars on the legs, thighs, and hips, nineteen being on the right leg.

On May 26th and June 23rd and 30th further injections of tuberculin were given, and on July 4th a recent lesion on the right thigh broke down and discharged after a fortnight's course, which was shorter than the usual course of the gummata. The pus was examined for tubercle bacilli but none found. Part of the wall of the abscess was removed, and on cutting and staining some tubercle bacilli were found, but in very small numbers.

Injections were continued up to July 21st, when her opsonic index was 1·15, and were then omitted for about seven weeks.

In June and July very few fresh gummata made their appearance, and these ran a more rapid course than the previous ones; but when she presented herself again on September 12th there were three recent fluctuating lesions which were on the point of rupture. She looked ill, and in August had vomited blood once, but clinically no pulmonary lesion could be detected. Her opsonic index had fallen to ·85.

Further injections of tuberculin were given up to November 11th, and her index to tubercle raised to 1·2, fresh tubercular gummata having ceased to form.

She then went into the provinces, visiting various towns, and was quite lost sight of until October 16th, 1906, eleven months afterwards.

She says she was quite free from the "ulcers" from the time she left off treatment at University College Hospital until six weeks

before she again visited the hospital. During the nine and a half months she was able to do anything, her appetite was very good, and her general health gave rise to no anxiety. Latterly five more gummata had made their appearance, and some quite recent ones were gradually increasing in size.

On October 16th her opsonic index was ·85, and she was given an injection of $\frac{1}{2000}$ mgm. tuberculin.

She is still under treatment, and, in view of the excellent results obtained by means of tuberculin injections in 1905, there is every reason to hope that the disease may again be arrested.

Remarks.

With the exception of Case 7 all the preceding cases were under treatment by means of vaccines for considerable periods of time, and some of them had previously shown themselves very resistant to other methods of treatment.

In the Acne vulgaris case occasional pustules and small abscesses were opened, but in the other cases the vaccine method was complicated only by the administration of Mist. sacch. ust., if this can be called a complication.

It remains for us to express our best thanks to Dr. Radcliffe-Crocker for his courtesy in the matter.

Note.

The opsonic estimations were in every case made by one of us (Bunch).

SOCIETY INTELLIGENCE.

THE DERMATOLOGICAL SOCIETY OF LONDON.

A MEETING of this Society was held at 11, Chandos Street, Cavendish Square, on Wednesday, November 14th, at 5.15 p.m., Mr. H. Willmott Evans being in the chair.

Dr. WILFRID FOX showed (1) a case of *Recklinghausen's disease* (for Mr. Malcolm Morris), a full account of which will appear in a subsequent number.

(2) A *case for diagnosis* of a child aged 13 months, who for the last six weeks had suffered from an eruption which was confined to the face and limbs. The child was brought to the hospital a fortnight ago, and the mother stated that the eruption began a month previously, and had been steadily getting worse. She also said that the child had had a similar rash, but with lesions not so large in size, six months before, immediately after vaccination. She denied that the child had had any drugs except purgatives, and thought that vaccination was the cause. The child had been fed on the breast, and beyond a little cough had always been perfectly well. The lesions, which were most marked on the backs of the thighs, the lower third of the legs, and just above the wrists, consisted of nodules which were elevated about a quarter of an inch above the skin, oval in shape, with the long axis across the limb and varying in size, the larger ones being about one inch long and half an inch wide. They were pink in colour except where some of them were covered with a thin crust, slightly purulent in places. To the eye the nodules suggested that they consisted of a granuloma, and the exhibitor had given a provisional diagnosis of septic granuloma or botryomycosis. To confirm this, one of the lesions was excised and divided into two parts, one being put through paraffin in the ordinary way, the other being used for bacteriological investigation, which was kindly undertaken by Dr. Slater. He reported that the culture which grew from the inoculation of the tissue consisted of a staphylococcus closely resembling *Staphylococcus aureus*. The organism grew quite pure, there being no contamination. Dr. Slater compared the organism with that of botryomycosis in the horse, the culture of which had been obtained from Professor Delépine, and found them indistinguishable. The two cultures were shown to the Society. The sections from the paraffin block showed a thickening of the epidermis with small abscesses in the layers; the corium contained a dense infiltration of cells, for the most part polymorphonuclear leucocytes. One section was stained by Pappenheim's method, which demonstrated the fact that the lesion was not a granuloma, as there were no plasma-cells present.

The mother, being again questioned regarding drugs, acknowledged that a doctor had given the child some medicine for the cough, and after some difficulty the prescription was obtained. The mixture contained two grains of potassium bromide in each dose, which had

been given four times a day for four days. The date on the prescription was, however, six weeks ago, after the rash appeared. Most of the members present thought that the eruption was due to the bromide, and that the organism was an accidental inoculation.

NOTE.—Since the case was shown a second biopsy has been done on the opposite arm as far away as possible from the previous one, and Dr. Slater reports that the same organism has grown in pure culture as on the first occasion. The exhibitor desired to express his thanks to Dr. Slater for his kindness in investigating the case.

Dr. GRAHAM LITTLE showed (1) a case of *Pityriasis rubra*, primary in onset, in a boy aged 13 years, who had had the disease for the past three months, and had been an in-patient at St. Mary's Hospital nearly the whole of that time. The history was clear and definite that the disease had commenced as an acute general red exfoliation without any preliminary skin-lesions; but it was also stated that he had had an exactly similar attack some years previously. When admitted the boy was emaciated and ill, and the skin was universally affected, the hair was in great measure lost, and the nails were thickened to five times their natural size. He had had some ectropion, due to the involvement of the face, but this had greatly improved during his treatment in the hospital. The scaling was very profuse and the limbs were drawn up and the muscles contracted at the elbow and knee. There was a fine tremor, very noticeable during the height of the disease. Several times during the course of the eruption he had had rises of temperature from no ascertainable cause other than the skin condition, and his pulse had been persistently rapid. He had thyroid administration for a part of the time, but this had been withdrawn in consideration of the frequency of the pulse, which had not, however, materially abated as a result of its withdrawal. The appetite and the digestion had remained excellent throughout the disease, and the urine had been normal and of good quantity. The boy had improved most rapidly with a local application of glycerine and Liq. carbonis detergens and was now on the high road to recovery.

The case was probably one of true Pityriasis rubra, and not secondary exfoliative dermatitis. Such cases were in the exhibitor's experience extremely rare. No tuberculous history, either family or personal, could be obtained. The tuberculo-opsonic index was normal.

(2) and (3) Two cases of *Dermatitis herpetiformis*. In the first, a

man aged 23 years, the disease had persisted nearly continuously for about five months. He was a schoolmaster, a brilliant scholar, and had had much mental strain. When first seen he had had a very extensive eruption of small grouped vesicles, intensely itchy, and distributed nearly all over the body. He had done well with arsenic and treatment in bed, but had had speedy relapses upon resuming his work. He had finally been sent away for a holiday, during which he improved. The exacerbations of the disease which would take place after periods of quiescence could be foretold by the patient by reason of a curious sensation, felt in the forehead principally. This he describes as a peculiar "restlessness in the head" attended by local irritation and occurring only at night, resulting in complete sleeplessness. Arsenic would appear to have dispelled these sensations. His blood had been examined and had shown pronounced eosinophilia (about 14 per cent.).

The second case was in a boy aged 8 years, who had had an acute outbreak apparently as the result of a sudden accidental immersion in water. He had been taken into the Children's Hospital, Shadwell, and was at that time absolutely covered with large and small vesicles. In some cases the lesions were large and isolated bullæ containing quite clear fluid, and in others there were small vesicles about eight or ten at a time, grouped exactly as in herpes. The correct nomenclature of the case was puzzling, and demonstrated to the exhibitor's mind the futility of attempting to make any valid distinction between pemphigus and Dermatitis herpetiformis, since here were lesions indisputably typical of both diseases. There had been vesicles on the buccal mucous membrane, but none were at present seen. After about three weeks in hospital he was discharged apparently free of the eruption, having only the marks of former bullæ on his skin; but the day after his discharge he was again brought up with another acute outbreak, and when shown at the Society there were numerous lesions, isolated large bullæ, and grouped small vesicles scattered about his body.

At the previous detention in hospital his blood had been examined and showed constant eosinophilia, the ratio being from 15 to 16·5 per cent. Some of the smaller vesicles had been aseptically punctured, and the contents received into culture-tubes. On the first occasion a pure culture of a short but typical streptococcus had been

obtained. The succeeding cultures were not obtained pure owing apparently to a laboratory contamination with hay-bacillus but in all the short streptococcus had been found. This observation had been made by the exhibitor before (*British Journal of Dermatology*, 1903, p. 410).

An interesting discussion took place as to the dividing line, if any could be drawn, between Dermatitis herpetiformis and Pemphigus. The consensus of opinion was that no such line could be drawn, that the case No. 2 was an object-lesson in the impossibility of making any such distinction, and it only remained to decide which name—Dermatitis herpetiformis or pemphigus—should be retained for this class of diseases. The finding of the streptococcus was interesting coming so soon after Dr. Bunch's demonstration of this organism in two cases of "pemphigus" in Dr Radcliffe-Crocker's clinique.

(4) A *case for diagnosis*, as between Pityriasis rosea and seborrhoic eczema. The patient was a woman aged 36 years, who had come up to St. Mary's Hospital ten weeks ago with a circinate eruption restricted to the upper part of the chest and neck and shoulders. The lesions were vividly pink rings enclosing a paler area, very slightly scaly and of curious shapes, round or oblong, with a diameter of an inch or more. Some of the earlier lesions had apparently been nummular patches, not rings. Scales examined repeatedly had shown no fungus. The eruption had persisted unchanged for over two months; she had had for four weeks a mixture containing salicin gr. xv, three times a day. Even at present the circinate rings were intact, and their peripheral redness was increased from time to time. The first diagnosis had been Pityriasis rosea, but in view of the persistence and the peculiar distribution a doubt had been felt whether it was not seborrhoic eczema, and the case had consequently been brought before the meeting for decision.

Opinions were divided between these two diagnoses. Dr. Radcliffe-Crocker and Dr. Arthur Whitfield favoured Pityriasis rosea: Dr. Colcott Fox and others supported the supposition of seborrhoic eczema.

Dr. Ormerod showed a *case for diagnosis*, the notes of which are as follows:

Maud S—, aged 22 years, single, works at "numerical printing." She has a rash on the face and limbs, which at present has the following characters:

The face shows a large, dull red, somewhat scaly area, which covers the whole lower part of the face from the eyes to the chin and the ramus of the jaw, with the exception of a band between the mouth and the nose, and another between the mouth and the chin. There is a fairly well defined margin along the ramus of the jaw, the redness and scaliness being most marked at the periphery of the patch.

On the back of each forearm is a large, red, scaly, somewhat ill-defined area. There are similar smaller patches on the backs of the fingers. On the wrists are some flat, shiny papules suggestive of Lichen planus, and some red patches, possibly formed by the aggregation of papules. These are seen on both aspects of the wrists. The rash is fairly symmetrical on both upper limbs.

On the right leg are some ill-defined, scaly patches. On the left leg is an ill-defined, red, scaly area, not unlike that on the face, and some scattered scaly patches. In addition, on the inner side of this leg is a large pigmented area and smaller pigmented patches on the inner side of the knee.

This patient was first seen on July 24th; she then had a rash on the back of the forearms, consisting of red, raised, irritable spots, a large red patch on the right cheek, and scattered red spots on the left cheek. The rash had appeared on the left forearm three weeks previously, and had spread to the other forearm and the face during the last two days. Her tongue was rather red and furred. It was diagnosed as Erythema multiforme. It began to subside under simple treatment, desquamating at the same time.

Towards the middle of August, according to the patient's statement (the exhibitor being away at the time) the rash got worse again, and gradually assumed its present character.

Since the end of September, when he saw her again, there had been little change in the rash on the limbs, but that on the face had faded considerably.

Her general health was good, but at two years she "thought she had a similar affection," which got well without treatment.

Most members thought that the eruption was Lichen planus, but it was admitted that the state of the face was peculiar. A lesion was discovered on the buccal mucous membrane.

Dr. Sequeira showed a young woman, aged 29 years, suffering

from *Lupus vulgaris* and other tuberculous lesions of the skin. The patient, a single woman, enjoyed good health until ten years ago, when, without any obvious change in her general condition, the right knee began to swell. At the same time a small spot of lupus appeared on the nose and a second on the right great toe. An operation was performed upon the knee, which proved to be tuberculous. A very successful result followed, and fair movement and a perfectly sound scar are the result. The spot of lupus upon the nose spread, and two years later the cheeks were involved. The lupoid lesion on the great toe remained quiescent until eighteen months ago, when it began to spread, and this increased activity was followed by the appearance of a series of swellings at intervals along the calf in the line of the external saphenous vein. These recently broke down and formed small abscesses and finally ulcers. They were doubtless the result of tuberculous lymphangitis. The facial lupus presents no unusual features. The lesion on the great toe is rather warty, but the condition of the skin of the right leg from the toes to the knee is remarkable. The entire limb is swollen and pits on pressure. The right calf measures 14½ inches, the left 11 inches. The skin of the region is of a brownish tint, and scattered all over it are a large number of discrete, circular, brown papules. They are distinctly palpable and resemble isolated lupus nodules. In some parts the lesions are larger—about one sixth to one third of an inch across, and these spots are more raised and scaly. In a few instances small necrotic areas have formed. The line of ulcers on the back of the calf has already been mentioned. The patient's general health is fair. Her tuberculo-opsonic index is ·7, and it is proposed to treat her with tuberculin (R.) injections.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

A MEETING of the above Society was held at 11, Chandos Street, on Wednesday, October 24th, 1906, Dr. LESLIE ROBERTS in the chair. The following cases were shown:

Mr. DAWSON showed a case of *chrysanthemum dermatitis*. The patient was a healthy man, aged 35 years, by occupation a florist,

who for the past four or five years invariably suffered from an acute dermatitis of the face, with redness and weeping. A few hours after handling chrysanthemums the face becomes affected, and almost recovers from Saturday to Monday, when he is absent from his work. The hands are never affected.

Dr. Alfred Eddowes showed, under $\frac{1}{12}$ oil immersion (Zeiss), *hairs from the scalp affected with psoriasis* and treated for several weeks with antiseptics. The psoriasis was clearing up, but the patient complained of the hair falling out. Keratosis of the mouths of the follicles was the most prominent feature, and on microscopical examination a micro-bacillus, sometimes in chains, was discovered round the root of the hairs.

Mr. T. J. P. Hartigan showed—(1) a case of *rodent ulcer* of the chest treated with radium; (2) a case of *Paget's disease of the breast* similarly treated; (3) drawings and microscopical preparations of a case of *blastomycosis* in a girl, aged 11 years, the first true case, he believed, to be reported in this country.

Mr. Spencer Hurlbutt showed—(1) a case of *Eczema seborrhoicum areatum*. The patient, a male, aged 43 years, first observed small patches on his leg about four months previously. The lesions now seen on the inner side of his right calf consist of two circinate patches rather larger than crown-pieces, with sharply-defined and slightly-raised margins. The affected surface is dry, of a reddish-brown colour, most marked at the periphery, and more or less covered with minute yellowish scales. The appearance of the lesions somewhat simulate psoriasis: the possibility of their being due to trichophytosis was negatived by microscopical examination.

(2) A case of *syphilis* in which the primary lesion upon the little finger had followed upon the scratch of a kitten.

Dr. Graham Little showed a case of *Tinea versicolor* in a young man with a distribution that rendered it interesting. There were several buff-coloured or pinkish patches, nummular in shape, and restricted to the upper part of the chest over the manubrium sterni. The shape, colour, and distribution of the patches suggested seborrhoic eczema very strongly; yet a microscopic examination of the

scales had shown unmistakably the presence of the fungus of Tinea versicolor. The history was only of some three weeks' duration, and no source of infection could be ascertained. The peculiar resemblance to seborrhoic eczema led the exhibitor to form the hypothesis that the fungus of Tinea versicolor had invaded previously existent patches of seborrhoic eczema—that a symbiosis had, in fact, occurred, paralleled by the secondary growth of moulds on cultures of ringworm, the moulds selecting the patches of medium on which ringworm fungus had already grown in preference to the clear portions left free by the fungus.

Dr. Colcott Fox, who saw the case, considered the appearance unique, and its resemblance to seborrhoic eczema so great that the hypothesis of previous invasion by this disease seemed probable.

Dr. G. Norman Meachen showed (1) a girl, aged 14 years, with *multiple scars* situated over the body, limbs, and scalp. The lesions were stated to have commenced at the age of ten months, and were said to have been of the nature of "mattery heads." She also had "eczema" when three years old and "consumptive" bowels. The general health had never been robust. When first seen by the exhibitor, upon July 30th, a few lesions indistinguishable from ordinary impetigo were seen upon the face and temples, and numerous scars were seen over nearly the whole body. These were mostly depressed, sharply defined, and oval in outline, and were said to have been preceded in each case by a lesion similar to the one then seen. At the time of the meeting a faint scar could be seen over the site of the July lesions. Unfortunately, no cultures had been obtainable.

Various suggestions were put forward by the members of the Society, prominent among which was the idea of the possible tuberculous origin and nature of the whole eruption.

(2) A case of *peculiar mottling of the skin associated with congenital heart disease* in a boy aged 6 years. The hands and feet showed a condition of *Erythema perstans seu congestiva*, but instead of being absolutely uniform in extent there were numerous small, sharply delineated areas of pallor, situated upon the dorsum and sides of the fingers and toes, giving these a very curious mottled appearance. There was some degree of pulmonary stenosis present, and the boy became slightly cyanotic on exertion.

Dr. T. D. Savill showed a case of (?) *Urticaria fibrosa* in a woman, aged 45 years, who was admitted to hospital on May 30th, 1906, suffering from a rash over the whole body except face and head. It was red, raised, firm to touch, and in gyrate lines and half-circles. On rubbing the lesions a white, wheal-like urticaria developed. A few of the gyrate lines were white and some livid. The lower part of the abdomen was so purple as to resemble purpura, and in this part felt like leather. There was profuse perspiration and some itching and burning. Her previous history is as follows: In the autumn, eight years ago, the eruption first started on the neck and legs, and spread over the entire body; it was very itchy. Blisters the size of a pea ensued, excepting on the face, palms, and soles. The rash got better in the summer but returned every succeeding autumn and winter, with sometimes quite large blisters all over the body, the legs being most affected. The menopause occurred about eight years ago, when the eruption first appeared. Some blood was passed *per rectum* during her first illness and again in 1906. The heart and lungs were sound.

Course of the disease in hospital.—Some pyorrhœa alveolaris was present, which was duly treated by milk diet and attention to the teeth. An examination of the blood revealed a deficiency of erythrocytes, these numbering only 1½ millions, while the hæmoglobin was 60 per cent. The spleen was palpable. There was no albuminuria. In August she began to have pain in the left arm, and several swellings the size of eggs appeared upon the shoulders and arms. The skin-lesions had improved. The following month she developed a pleural effusion and left hemiplegia, both of which symptoms had nearly disappeared by the end of October. With regard to drug treatment, she had been taking quinine at first, then calcium chloride, but since September 13th most improvement was noticed under arsenic and iron.

Dr. Stainer showed a boy, aged 9 years, suffering from *Xerodermia pigmentosa*. The parents were first cousins, the father's mother and the mother's mother being sisters. There were two children of the marriage—two boys—the elder, aged 9 years (the patient), and the younger, aged 3 years, who was, as far as could be ascertained, in perfect health.

The patient probably began to display symptoms of the disease at

the age of three, when the pigmentation became a noticeable feature: the warty growths on the face began to appear about two years later. The disease, in its present state, presented the following characters:

The pigmentation was due to large numbers of deeply-coloured freckles, distributed on the face, ears, and round the neck downwards to about the level of the clavicles. On the arms a similar, but less intense, pigmentation extended, mostly on the extensor surfaces from the insertion of the deltoid muscles downwards to the tips of the fingers. There were no other lesions present on the arms. On the face, scattered here and there, were a few small atrophic areas, but without any evidence of telangiectases. On the face and ears there were numerous warty, rounded prominences of a diameter of an eighth to a quarter of an inch. Two or three of these lesions had broken down with the formation of indolent superficial ulcers.

Several of these warty growths had been removed and examined microscopically. In every case Dr. Dudgeon reported that a squamous-celled carcinoma was situated deep in the corium, and that the epidermis was apparently normal except for some excessive pigmentation.

The left side of the face had been treated by Dr. Grey with X-rays for a considerable time, and there had, perhaps, been a slight improvement.

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